



The CADD/GIS Technology Center

for facilities, infrastructure, and environment

A/E/C CADD Standard

Main Text and Appendices A, B, and C Appendix D

The A/E/C CADD Standard is
compliant with Version 2.0
of the U.S. National
CAD Standard.

The A/E/C CADD Standard
contains supplemental materials
and DoD specific requirements
not addressed in the U.S. National
CAD Standard.



Release 2.0

Approved For Public Release; Distribution Is Unlimited

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products.

The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.



PRINTED ON RECYCLED PAPER

A/E/C CADD Standard

Main Text and Appendices A, B, and C
Appendix D

Release 2.0

Approved for public release; distribution is unlimited

Contents

Preface	viii
1 — Introduction	1
Acronyms	1
Scope	1
Purpose	1
Background	2
International System of Units (SI) Considerations	2
Future Technologies	2
Interchangeable Terminology	3
Target Systems	3
Additions/Revisions	3
2 — Drawing File Organization	5
Design Cube	5
Available drawing area	5
File accuracy (units)	6
Drawing units/working units recommendations	6
Origin (global origin)	6
Model Files and Sheet Files	7
Electronic Drawing File Naming Conventions	8
Model file naming convention	8
Sheet file naming convention	12
Coordination Between Sheet File Name and Sheet Identifier	17
3 — Graphic Concepts	19
Presentation Graphics	19
Line widths	19
Line types/styles	20
Line color	21
Screening	21
Text styles/fonts	23
Plotting	23
Border Sheets	23
Sheet sizes	23

Title block	25
Drawing Scales	27
Dimensioning in Metric (SI)	27
Millimeters	27
Meters	31
Large units of measure	31
Dual units	32
 4 — Level/Layer Assignments	33
Levels/Layers	33
Level/layer naming conventions	35
ISO format	35
Model Files	35
Level/layer assignment tables	35
Border sheets	37
Reference files (XREFs)	37
Sheet Files	38
Level/layer assignment tables	38
Development of sheet files	39
 5 — Standard Symbology	41
Introduction	41
Electronic Version of the Symbology/Elements	41
Deliverables	41
Line styles	41
Tabulated Version of the Symbology/Elements	41
 6 — A/E/C CADD Standard Implementation Tools	44
References	47
Appendix A: Model File Level/Layer Assignment Tables	A1
Appendix B: Sheet File Level/Layer Assignment Tables	B1
Appendix C: Color Comparison	C1
Appendix D ¹ : A/E/C CADD Symbology	D1
SF 298	

¹ Bound separately.

List of Figures

Figure 1. Available drawing size	5
Figure 2. AutoCAD Units Dialog Box	6
Figure 3. Origins in MicroStation and AutoCAD	7
Figure 4. Sheet file composition	8
Figure 5. Model file naming convention	9
Figure 6. Sheet file naming convention	17
Figure 7. Typical border sheet title block with sheet identification block	18
Figure 8. Sample metric drawing sheet with vertical title block	26
Figure 9. Designer identification block (typ.)	26
Figure 10. Issue block (typ.)	26
Figure 11. Management block (typ.)	26
Figure 12. Project identification block/sheet title block	27
Figure 13. Sheet identification block	27
Figure 14. Dimension in millimeters	31
Figure 15. Dimension in meters	31
Figure 16. Proper dimension presentations for metric measurements with four or more digits	31
Figure 17. Unit format	31
Figure 18. Typical levels/layers contained in a sheet file	33
Figure 19. Sheet- and model-specific information	34
Figure 20. Level/layer naming format methods	35
Figure 21. ISO 13567-2 level/layer naming method	36
Figure 22. Model file level/layer assignment table	37

Figure 23. Using referenced model files to build a new model file without redundant effort	38
Figure 24. Sheet file level/layer assignment table	39
Figure 25. Using multiple referenced model files to build a sheet file without redundant effort	40
Figure 26. Symbology directory structure	42
Figure 27. Line element	43
Figure 28. Pattern element	43
Figure 29. Symbol element	43
Figure 30. Object element	43
Figure 31. MicroStation workspace	45
Figure 32. Workspace checker	46
Figure 33. AutoCAD workspace	46

List of Tables

Table 1. Interchangeable Terminology	4
Table 2. MicroStation Working Units and Global Origins	7
Table 3. Discipline Designators	9
Table 4. Model File Types	10
Table 5. Discipline Designators with Level 2 Designators	13
Table 6. Sheet Type Designators	17
Table 7. Comparison of Line Widths	19
Table 8. Standard Line Types/Styles	20
Table 9. Screen Color Comparison	21
Table 10. Screened Colors	22

Table 11. Comparison of Font Types	24
Table 12. ISO, ANSI, and Architectural Sheet Size Comparison	25
Table 13. Drawing Scales	28
Table 14. Inch-pound Text Sizes	29
Table 15. Metric Text Sizes	30

Preface

The “A/E/C CADD Standard Manual” has been developed by the CADD/GIS Technology Center (CGTC) for Facilities, Infrastructure, and Environment to eliminate redundant Computer-Aided Design and Drafting (CADD) standardization efforts within the Department of Defense (DoD) and the Federal Government. The manual is part of an initiative to consolidate existing CADD drafting standards and to develop data standards that address the entire life cycle of facilities within the DoD. The A/E/C CADD Standard Manual is part of a set of standards being developed by the CGTC. Additional manuals include the following:

- a. Contract Language Guidelines for Acquiring CADD and GIS Deliverables from Architect-Engineer (A-E) Consulting Firms
- b. Spatial Data Standard for Facilities, Infrastructure, and Environment
- c. Facility Management Standard for Facilities, Infrastructure, and Environment

Information on all these documents can be obtained from the CGTC’s web page at <http://tsc.wes.army.mil>.

Chapters 1-6 of this manual address topics such as presentation graphics, level/layer assignments, electronic file naming, and standard symbology. Appendices A-D contain tables on model and sheet file level/layer names, color comparisons, and A/E/C CADD symbology. The CGTC’s primary goal is to develop a nonproprietary CADD standard that

incorporates existing industry, national, and international standards.

Mr. Harold L. Smith is Chief of the CGTC, which is located in the Information Technology Laboratory (ITL), U.S. Army Engineer Research and Development Center, Waterways Experiment Station (WES), Vicksburg, MS. The Acting Director of ITL is Mr. Timothy D. Ables. At the time of publication of this report, the Director of ERDC was Dr. James R. Houston. Commander and Executive Director was COL John W. Morris III, EN.

United States National CAD Standard

In 1995, the combined resources of the CADD/GIS Technology Center, the American Institute of Architects (AIA), the Construction Specifications Institute (CSI), the United States Coast Guard, the Sheet Metal and Air Conditioning Contractors National Association (SMACNA), the General Services Administration (GSA), and the National Institute of Building Sciences’ (NIBS) Facility Information Council began an effort to develop a single CADD standard for the United States. Working together, these organizations agreed to develop an integrated set of documents that collectively would represent the United States National CAD Standard.

The sections of the United States National CAD Standard were developed as follows:

- Layering and model file naming were developed and published by AIA, with assistance from CSI and CGTC.

- Drawing set organization and sheet file naming were developed and published by CSI, assisted by CGTC, and reviewed by AIA.
- Sheet organization was developed and published by CSI, with assistance from AIA and CGTC.
- Schedules were developed and published by CSI, assisted by CGTC, and reviewed by AIA.
- Plotting guidelines (colors and line weights) were developed by CGTC and the United States Coast Guard, and reviewed by CSI and AIA.
- Drafting conventions including notations, symbols, diagrams, scales, and line types were developed by CSI, CGTC, the United States Coast Guard, and SMACNA; assisted by AIA; and published by CSI.
- Nongraphic attributes will be developed and published by CGTC, the International Alliance for Interoperability (IAI), vendors, and trade associations, with review by CSI and AIA.

A Memorandum of Understanding (MOU) was signed on August 8, 1997. In accordance with that MOU, Release 2.0 of the A/E/C CADD Standard follows, utilizes, or references the work developed by each of the signatories. The two main documents referenced within Release 2.0 of the A/E/C CADD Standard are

- “The Uniform Drawing System”
The Construction Specifications Institute
601 Madison Street
Alexandria, VA 22314-1791
<http://www.csinet.org>
- “AIA CAD Layer Guidelines”
The American Institute of Architects Press
1735 New York Avenue, N. W.
Washington, DC 20006
<http://www.aiaonline.com/>

Each of these documents can currently be obtained from the authoring agency or can be purchased together as part of the United States National CAD Standard. Additional information on the United States National CAD Standard can be obtained from

- NIBS Facility Information Council
National Institute of Building Sciences
1090 Vermont Avenue, N. W., Suite 700
Washington, DC 20005-4905
<http://www.nationalcadstandard.org>

1 Introduction

Acronyms

First, a few useful acronyms:

- A-E - Architect-Engineer
- A/E/C - Architectural, Engineering, and Construction
- AIA - American Institute of Architects
- ANSI - American National Standards Institute
- ASTM - American Society for Testing and Materials
- CAD - Computer-Aided Design
- CADD - Computer-Aided Design and Drafting
- CGTC - The CADD/GIS Technology Center
- CSI - Construction Specifications Institute
- DoD - Department of Defense
- FM - Facility Management
- GIS - Geographic Information System
- IAI - International Alliance for Interoperability
- IFC - Industry Foundation Class
- IOC - Intelligent Object Class
- ISO - International Organization for Standardization

- NCS - National CAD Standard
- NIBS - National Institute of Building Sciences
- SI - International System of Units (Le Système International d'Unités)
- UDS - Uniform Drawing System

Scope

This manual provides guidance and procedures for preparing Computer-Aided Design and Drafting (CADD) products within the Department of Defense (DoD).

Chapters 1-6 of this manual address topics such as presentation graphics, level/layer assignments, electronic file naming, and standard symbology. Appendices A-D contain tables on model and sheet file level/layer names, color comparisons, as well as Architectural, Engineering, and Construction (A/E/C) CADD symbology.

Purpose

The purpose of this manual is to set a basic CADD standard to ensure consistent electronic deliverables (products) within the DoD. These consistent deliverables are part of a comprehensive installation life-cycle management strategy. This manual sets a CADD standard specifically for the architectural, engineering, and construction disciplines of facilities development and civil works projects. As this manual evolves, it will be integrated with other standards initiatives by the CADD/GIS Technology Center (CGTC) for

Facilities, Infrastructure, and Environment such as Contract Language Guidelines, Spatial Data Standards, and Facility Management (FM) Standards.

Background

The immediate benefits of CADD standards are many: consistent CADD products for customers; uniform requirements for A-E deliverables; sharing of products and expertise; and collection, manipulation, and exchange of database information. Recognizing such potential benefits, each of the DoD agencies independently initiated efforts to establish CADD standards in the late 1980's. The Air Force Logistics Command (1989) released the "Architectural and Engineering Services for CADD Implementation Within Air Force Logistics Command." Headquarters, U.S. Army Corps of Engineers (1990), published Engineer Manual 1110-1-1807, "Standards Manual for U.S. Army Corps of Engineers Computer-Aided Design and Drafting (CADD) Systems." In 1993, the Naval Facilities Engineering Command distributed its "Policy and Procedures for Electronic Deliverables of Facilities Computer-Aided Design and Drafting (CADD) Systems."

To consolidate these efforts into a single standard, the CGTC was tasked to develop standards for the A/E/C disciplines. This manual presents the CGTC's effort at standardizing CADD requirements for A/E/C design and construction documents. To facilitate the use of this standard, supplementary software packages are available that automate the implementation and use of the standard. This software allows the operator to select preset system variables to align with the requirements of the "A/E/C CADD Standard Manual" to ensure consistent and easy compliance with the standard (see Chapter 6, "A/E/C CADD Standard Implementation Tools").

International System of Units (SI) Considerations

For this standard manual, the impact of the SI, more commonly referred to as the metric system, is addressed on such items as drawing scales, sheet sizes, and dimensioning. The SI was established by the General Conference of Weights and Measures of 1960, as interpreted or modified from time to time for the United States by the Secretary of Commerce under the authority of Public Law 94-168, the Metric Conversion Act of 1975, and the Metric Education Act of 1978. As of January 1, 1992, in accordance with Public Laws 94-168 and 100-418, the Omnibus Trade and Competitiveness Act of 1988, and Executive Order 12770, "Metric Usage in Federal Government Programs," July 25, 1991, all new and revised construction standards and criteria must be developed using the SI.

Future Technologies

There are several ongoing initiatives to create a universal language for collaborative work in the area of building and construction software. This work stems from the need to automate current building and construction tasks to become more efficient and cost effective. One of these initiatives is by the International Alliance for Interoperability (IAI), a nonprofit building industry alliance comprising architects, engineers, contractors, software vendors, government agencies, research laboratories, and universities. The goal of the IAI is to unite the A/E/C and FM businesses by specifying Industry Foundation Classes (IFCs) as a universal language. The concept behind the IFCs is to create a series of standard intelligent software objects for the building industry that allow all process disciplines (i.e., architects, designers, engineers, builders, facilities managers) to exchange information. The IAI is developing IFCs that allow current software packages such as AutoCAD and MicroStation to share building and construction data. IFCs would improve the quality of the life-cycle of a building from

construction through maintenance and ultimately to demolition. These improvements would result from reductions in expense and delivery time, enhanced communications, and an increase in discipline proficiency.

A prerequisite of this effort is the deployment of mechanisms capable of retaining knowledge during the project life cycle. Intelligent Object Classes (IOCs) can serve this purpose. An IOC gathers information during the progression of the project and makes it available to the participants. Starting from the design phase, IOCs collect additional data about an object, for example, “how to design” or “how to construct” that particular object. The structure of an IOC contains information about the following:

- Generic attributes of common use (e.g., identification, material).
- Methods to support specialist tasks (e.g., volume calculations).
- CADD representation information including geometry and topology.
- Interrelationships with other objects.

In tandem with the IAI effort, the CGTC is developing nongraphic attribute data as part of the A/E/C CADD Standard.

Interchangeable Terminology

Within the various commercially available CADD systems, many identical or related concepts are given different names. To aid users of this manual, some instances of related or interchangeable terminology used in MicroStation and AutoCAD are listed in Table 1.

Target Systems

This manual is not targeted toward any specific CADD system or software. However, to ensure successful translations among CADD

applications, certain system-specific characteristics were considered and the standard adjusted accordingly. In preparing the standard, several baseline decisions were made:

- The standard must be applicable to the latest release of commercially available CADD packages. AutoCAD and MicroStation were chosen based on their prevalence in the DoD and their availability through the Installation Management/Facilities CAD2 contract.
- The standard is based on CADD applications that utilize layer/level names and reference files.
- The standard requires every final plotted drawing sheet to have its own separate electronic drawing file.
- Since three-dimensional files are not compatible with two-dimensional files, it is recommended that all drawings be created as 3-D files.

Additions/Revisions

This standard is intended to be neither static nor all-inclusive and thus will be updated and enhanced as appropriate. Suggestions for improvements are strongly encouraged so that subsequent updates will reflect the input and needs of CADD users.

Recommendations or suggested additions should be sent to:

The CADD/GIS Technology Center
USAE Research and Development Center,
Waterways Experiment Station
ATTN: CEERD-ID-C/Spangler
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

Or by e-mail at: spangls@wes.army.mil

Table 1
Interchangeable Terminology

MicroStation	AutoCAD	Definition
Integer d/b	64-bit floating point d/b	The method for storing drawing attribute data.
Disk-based	Memory-based	Where drawing data are stored until the active file is closed.
Auxiliary Coordinate System (ACS)	User Coordinate System (UCS)	An XYZ coordinate system where the origin is selected by the user.
Active	Current	File or object in use.
Cell	Block	Single or multiple entities grouped together to create a single element.
Dimension attributes	Dimensions styles	Controls the appearance of dimension elements.
.dgn	.dwg	A DOS-based extension for drawing files.
Drop	Explode	Converts an element into multiple entities.
Dynamic update	Dragmode/rubberbanding	Display of element(s) being drawn or modified as pointer/cursor moves on the screen.
Element	Entity	A single object contained in a drawing.
Fit	Zoom all	Displays all graphics currently in the drawing file.
Global origin/design cube	World Coordinate System/Origin	Defines the location(s) of all entities in a design/drawing using the Cartesian coordinate system.
Identify/accept	Select/pick	Entity or entities chosen for manipulation or modification.
Image	Slide	A screen capture of graphics in raster format.
Key entry field	Command prompt	Allows for keyboard input from users.
Key point snap	Object snap (Osnap)	Controls the selection location for entities.
Levels	Layers	Used as transparent overlays for display graphics.
Line style	Linetype	Defines the appearance of lines.
Linestring	Polyline	Connected line segments.
Locate tolerance	Pickbox	Identification/selection limits for the drawing cursor.
MDL/Visual BASIC	ARX/AutoLISP	System-specific command language.
Message field	Status line	Displays current drawing status and/or text output from the application.
Monument point	Insertion point	Benchmark point used to place objects in a drawing.
Move element	Move	Relocation of entities.
Patterning	Hatching	To fill an area within a drawing with a symbolic texture.
Precision key in	Coordinate entry	User-defined XYZ values.
Reference file	External reference	A design/drawing file attached to an active drawing.
Seed file	Prototype drawing	A drawing design template file.
Tentative/Data point	Pointing/pick point	A point within the drawing selected using a pointing device.
Update	Redraw/Regenerate	Refreshes screen display.

2 Drawing File Organization

Design Cube

Available drawing area

The two most extensively used CADD applications within the DoD, AutoCAD and MicroStation, manage the available drawing area in an electronic file differently. MicroStation has a limited drawing area (design cube) composed of individual points that restrict the physical size of any drawing (Figure 1).

MicroStation's design cube has 4,294,967,296 points in each axis (x,y,z) of the design cube. These points are called positional units (PU). Positional units are grouped into larger units called subunits (SU), and subunits are grouped into even larger units called master units (MU). Together, these groups are called working units (MU:SU:PU). These groups will be discussed in more detail in the next section.

By defining the values of working units, the MicroStation user defines the measurable limits of the design cube. For example, the working units for most architectural drawings (feet-inches) are 1:12:8000 (MU = feet, SU = inches). With these working units, a design cube of 44,739 feet per side is created:

$$4,294,967,296 \div (12 \text{ in./ft} \times 8000) = 44,739 \text{ ft}$$

For an SI (metric) drawing with working units of 1:1:100 (MU = millimeters, SU = none), the design cube has a length of 42,949,672 millimeters per side.

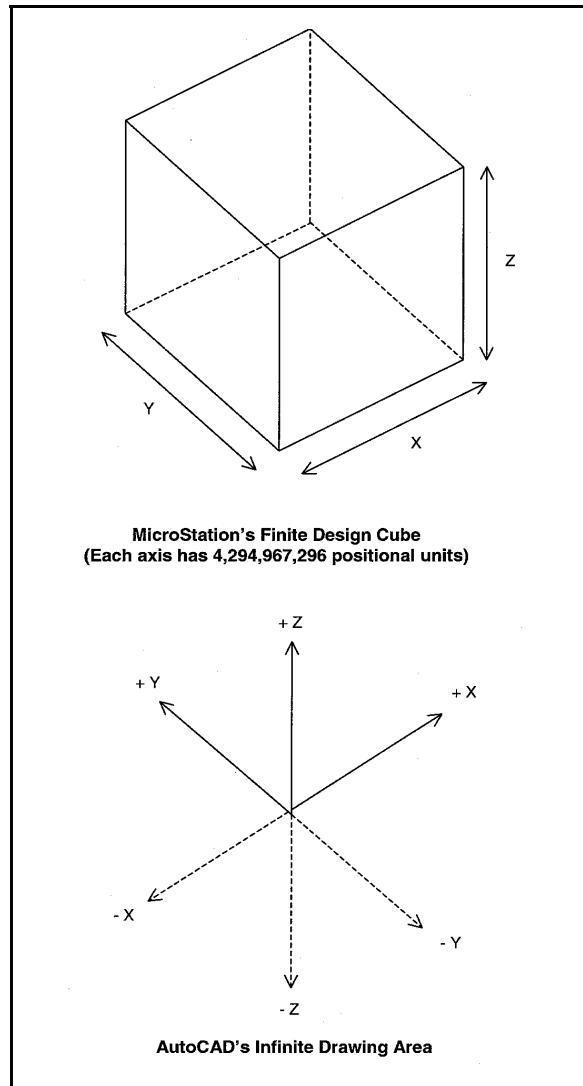


Figure 1. Available drawing size

$$4,294,967,296 \div (1 \text{ mm} \times 100) = 42,949,672 \text{ mm}$$

In contrast, AutoCAD's approach provides for a drawing area with infinite range in each positive and negative axis (x,y,z).

Note: *The upcoming MicroStation V8 will also allow for an infinite drawing area.*

File accuracy (units)

CADD systems allow the designer to work in "real world" units. The most common units are feet and inches, feet and tenths of feet, meters, and millimeters.

MicroStation's approach to file accuracy allows the user to set the working units (i.e., real world units) as the following, introduced in the previous section:

- Master units (MU) = The largest unit that may be referred to when working in the design file (e.g., feet, meters).
- Subunits (SU) = Subdivisions of master units in the working unit definition (e.g., inches, millimeters).
- Positional units (PU) = The smallest unit that may be addressed in the design file. The number of positional units per subunit determines the precision of the drawing and the size of the design cube.

In AutoCAD, the basic drawing unit for any file is the distance between two fixed Cartesian coordinates. For example, the distance between coordinates (1,1,1) and (1,1,2) is one drawing unit. A drawing unit can correspond to any measurement (e.g., inch, foot, meter, mile). AutoCAD users may enter the "Units" display option to set the desired drawing units.

The "Units" command of AutoCAD does not have a direct metric system setup. For metric designs, the recommended procedure is to choose the "Decimal" option in the drawing units dialogue box (Figure 2). This will allow

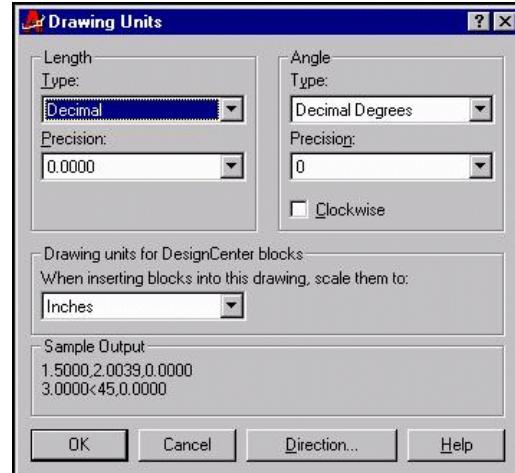


Figure 2. AutoCAD Units Dialog Box

each drawing unit to represent decimal meters, millimeters, etc., at the discretion of the user.

Drawing units/working units recommendations

Recommendations for working units in MicroStation design files are shown in Table 2.

AutoCAD users should choose either the architectural (feet and inches), engineering (feet and tenths), or decimal (suitable for meters or millimeters) options as provided in the "Units" command screen.

Origin (global origin)

Positioned within every electronic drawing file is an origin ("global origin" in MicroStation and "origin" in AutoCAD). The origin of a drawing file is important because it serves as the point of reference from which all other elements are located. Origins are typically defined (located) in a drawing file by the Cartesian coordinate system of x, y, and z (Figure 3).

Table 2**MicroStation Working Units and Global Origins**

Units	MU	SU	PU	Design Cube Size	Recommended Global Origin
Inch-pound (A/E/C)	1 (ft)	12 (in)	8000	44,739 ft/side	GO=22369.6213, 22369.6213, 22369.6213
Inch-pound (Civil, Civil Works, Geotechnical, Survey/Mapping)	1 (ft)	100	10	4,294,967 ft/side	GO=0, 0, 2147483.648
Metric (A/E/C)	1 (mm)	1	100	42,949,672 mm/side	GO=21474836.48, 21474836.48, 21474836.48
Metric (Civil, Civil Works, Geotechnical, Survey/Mapping)	1 (m)	1000	1	4,294,967 m/side	GO=0, 0, 2147483.648
Metric (Mechanical Machine Design)	1 (mm)	1000	1	4,294,967 mm/side	GO=2147483.648, 2147483.648, 2147483.648

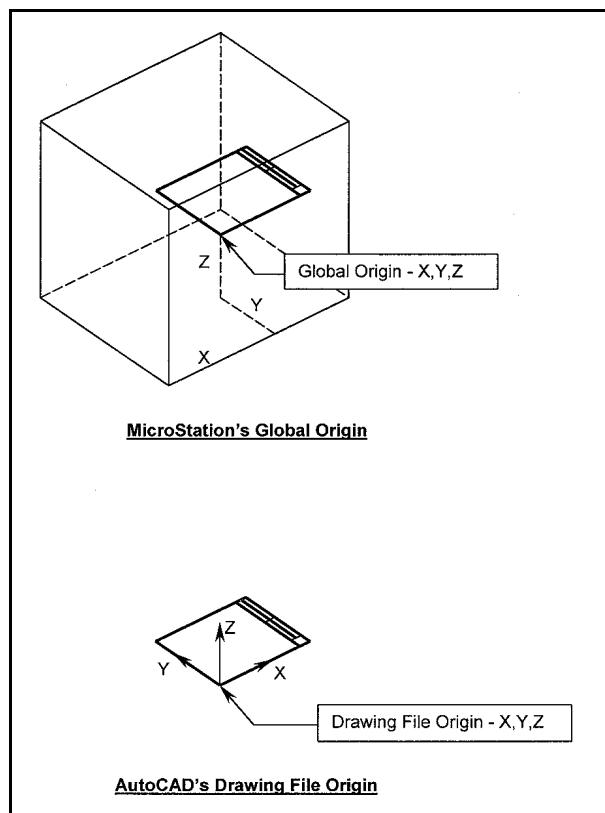


Figure 3. Origins in MicroStation and AutoCAD

The benefit of standardizing the location of the origin of a drawing is most notable in the use of reference files (see section “Reference Files (XREFs)” in Chapter 4). Also, in certain disciplines, particularly mapping, the location of the origin determines the available drawing area (MicroStation only). A standardized origin is also helpful when translating files between CADD applications. Origin recommendations are given in Table 2 (Note: for AutoCAD users the recommended global origin will be 0,0,0).

Note: In MicroStation, the location of the global origin does not affect the size of the design cube, but does limit the range of the positive and negative x, y, and z positional units. For example, a design file with the global origin located in the center of the design cube limits the number of positional units in each axis (x, y, and z) to 2,147,483,648.

Model Files and Sheet Files

Two distinct types of CADD files are addressed in this standard: model files and sheet files.

A model file contains the physical components of a building (e.g., columns, walls, windows, ductwork, piping, etc.). Model files are drawn at full scale and typically represent plans, elevations, sections, etc.

A sheet file is synonymous with a plotted CADD drawing file. A sheet file is a selected view or portion of the model file(s) within a border sheet. Sheet files are usually plotted at a particular scale, since the border sheet is scaled up to fit around the full scale model files. In other words, a sheet file is a “ready-to-plot” CADD file.

Figure 4 illustrates how different model files are referenced to a sheet file (notice that the border sheet is always a referenced model file). A sheet file is the combination of referenced model files with sheet-specific text/symbols to create a final “ready-to-plot” CADD file. A useful American Institute of Architects (AIA) rule of thumb states: “Model files are always referenced by other files, while sheet files are never referenced by other files.” See Chapter 4 for additional information.

Electronic Drawing File Naming Conventions

Naming conventions for electronic drawing files (both model files and sheet files) allow CADD users to determine the contents of a drawing without actually displaying the file. They also provide a convenient and clear structure for organizing drawing files within project directories.

Model file naming convention

The model file naming convention (Figure 5) has one optional field, followed by three mandatory fields. While the first field is optional and may be omitted, the remaining fields must be used and in the correct sequence.

The first field is entirely optional and can be used for a 0 to 20-character *Project Code*. Project codes are developed by the user or the system administrator and are not standardized within this document. The use of Project Codes in file names is highly recommended, because it prevents the same file name from existing in different directories. Following the optional

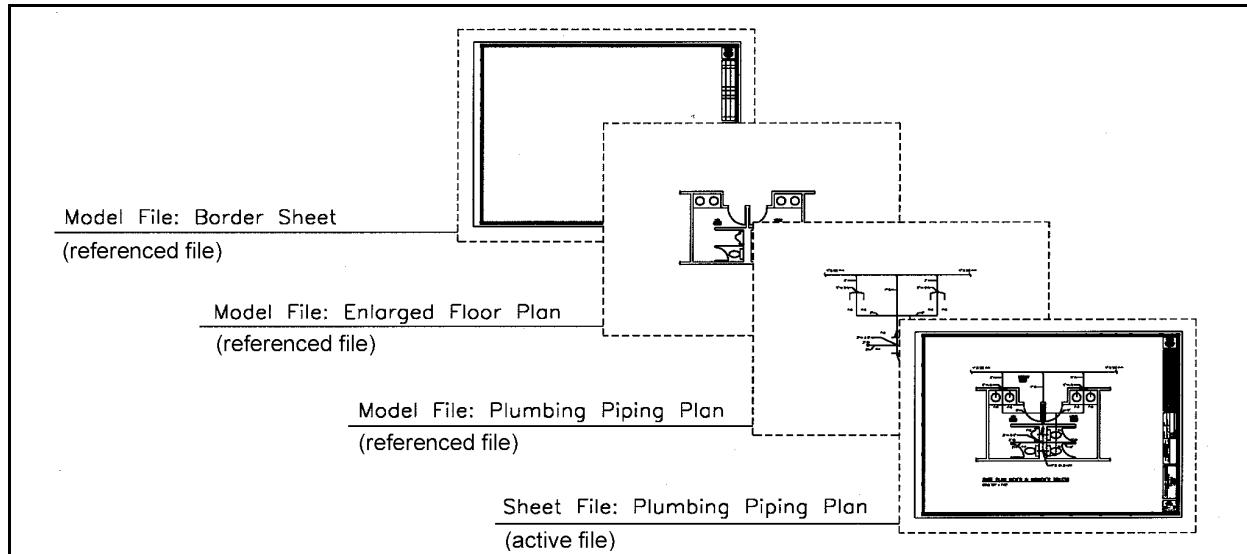


Figure 4. Sheet file composition

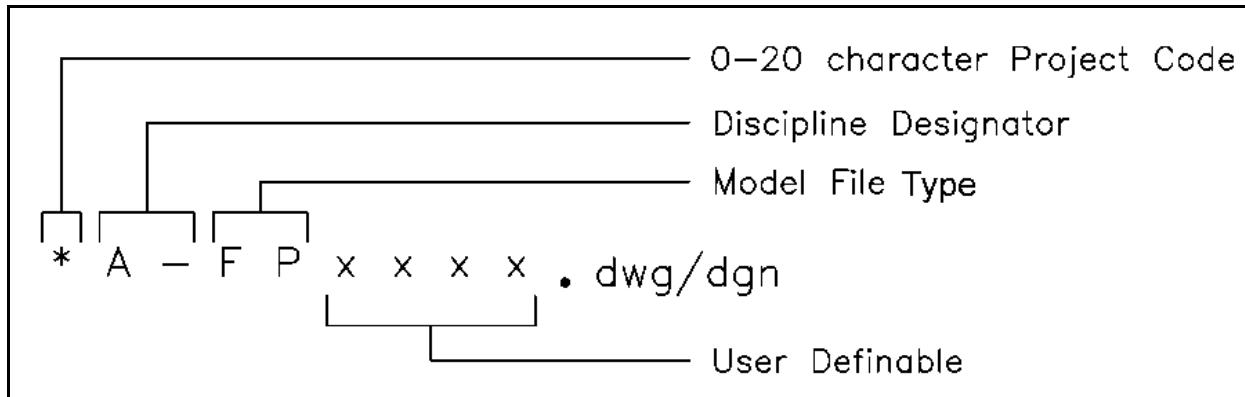


Figure 5. Model file naming convention

Project Code, the first two-character field represents the *Discipline Designator*. The allowable characters for the first character in the Discipline Designator are listed in Table 3. The second character of the Discipline Designator field is always a hyphen “-”. The next two-character field represents the *Model File Type* (Table 4). The final four-character field is user-definable.

Note: If the Workspace and Checker are being implemented, all eight of the mandatory characters in the model file name must be used and in the correct sequence. If all of the User Definable characters are not needed, placeholders must be used for the Workspace to function properly.

Example: The model file name for a project at Engineer Research and Development Center (ERDC), Building 8000, 1st floor, Architectural Floor Plan could be:

ERDC8000A-FPF1XX.dgn/dwg

where ERDC8000 is the Project Code, A- is the Discipline Designator, FP is the Model File Type (Floor Plan), and F1 is a user-definable set of characters for Floor 1. Since all the user definable characters were not used, the characters XX were used as placeholders.

Table 3
Discipline Designators

Discipline	Designator
General	G
Hazardous Materials	H
Survey/Mapping	V
Geotechnical	B
Civil Works	W
Civil	C
Landscape	L
Structural	S
Architectural	A
Interiors	I
Equipment	Q
Fire Protection	F
Plumbing	P
Process	D
Mechanical	M
Electrical	E
Telecommunications	T
Resource	R
Other Disciplines	X
Contractor/Shop Drawings	Z
Operations	O

Existing/Demolition model file naming. There are instances when a facility is being renovated and the as-built designs need to be revised to show demolition and new items.

Table 4 Model File Types		
Discipline	Code	Definition
<i>General</i>		
	BS*	Border Sheet
	KP*	Keyplan
<i>Hazardous Materials</i>		
	DT	Detail
	EL	Elevation
	LG*	Legend
	PP*	Pollution Prevention Plan
	SC	Section
	XD*	Existing/Demolition Plan
<i>Survey/Mapping</i>		
	AL*	Existing Airfield Lighting Plan
	CP*	Existing Communication Plan
	EU*	Existing Electrical Utilities Plan
	FU*	Existing Liquid Fuel Utilities Plan
	HP*	Hydrographic Survey Plan
	HT*	Existing HTCW Utilities Plan
	IW*	Existing Industrial Waste Water Plan
	LG*	Legend
	NG*	Existing Natural Gas Utilities Plan
	PB*	Project Boundary
	PR*	Existing Profile
	SC	Existing Section
	SP*	Survey and Mapping Plan
	SS*	Existing Sanitary Sewer Plan
	ST*	Existing Storm Sewer Plan
	WA*	Existing Domestic Water Plan
<i>Geotechnical</i>		
	BL*	Boring Location Plan
	LB*	Boring Log
	LG*	Legend
	SH	Schedule
<i>Civil</i>		
	AF*	Airfield Plan
	AM*	Airfield Pavement Marking Plan
	CP*	Channel Plan
	DT	Detail
	EC*	Erosion Control Plan

Table 4 (Continued)		
Discipline	Code	Definition
<i>Civil (Continued)</i>		
	EL	Elevation
	FU*	Liquid Fuel Utilities Plan
	GP*	Grading Plan
	IP*	Installation Plan/Base Map
	IW*	Industrial Waste Water Plan
	JP*	Joint Layout Plan
	KP*	Staking Plan
	LG*	Legend
	NG*	Natural Gas Utilities Plan
	PL*	Project Location Map
	PR*	Profile
	SC	Section
	SH	Schedule
	SP	Site Plan
	SS*	Sanitary Sewer Plan
	ST*	Storm Sewer Plan
	TS*	Transportation Site Plan
	WA*	Domestic Water Plan
	XD*	Existing/Demolition Plan
<i>Landscape</i>		
	DT	Detail
	EL	Elevation
	IP*	Irrigation Plan
	LG*	Legend
	LP*	Landscape Plan
	SC	Section
	SH	Schedule
	XD*	Existing/Demolition Plan
<i>Structural</i>		
	3D	Isometric/3D
	CP*	Column Plan
	DT	Detail
	EL	Elevation
	EP*	Enlarged Plan
	FP*	Framing Plan
	LG*	Legend
	NB*	Non-Building Structures Plan
	NP*	Foundation Plan

Table 4 (Continued)		
Discipline	Code	Definition
<i>Structural (Continued)</i>		
	SC	Section
	SH	Schedule
	XD*	Existing/Demolition Plan
<i>Architectural</i>		
	3D	Isometric/3D
	AC*	Area Calculations/Occupancy Plan
	CP*	Reflected Ceiling Plan
	DT	Detail
	EL	Elevation
	EP*	Enlarged Plan
	FP	Floor Plan
	LG*	Legend
	QP	Equipment Plan
	RP*	Roof Plan
	SC	Section
	SH	Schedule
	XD*	Existing/Demolition Plan
<i>Interiors</i>		
	3D	Isometric/3D
	DT	Detail
	EL	Elevation
	EP*	Enlarged Plan
	LG*	Legend
	QP	Equipment Plan
	RP*	Furniture Plan
	SC	Section
	SH	Schedule
	SP*	Signage Placement Plan
	WP*	System/Prewired Workstation Plan
	XD*	Existing/Demolition Plan
<i>Fire Protection</i>		
	DG	Diagram
	DT	Detail
	FA*	Fire Alarm/Detection Plan
	FP*	Fire Suppression Plan
	LG*	Legend

Table 4 (Continued)		
Discipline	Code	Definition
	LP*	Life Safety Plan
	SH	Schedule
	XD*	Existing/Demolition Plan
<i>Plumbing</i>		
	DG	Diagram
	DT	Detail
	EL	Elevation
	EP*	Enlarged Plan
	LG*	Legend
	PP*	Piping Plan
	SH	Schedule
	XD*	Existing/Demolition Plan
<i>Mechanical</i>		
	3D	Isometric/3D
	DG	Diagram
	DT	Detail
	EL	Elevation
	EP*	Enlarged Plan
	HP*	HVAC Plan
	HT*	HTCW Utilities Plan
	LG*	Legend
	MD*	Machine Design Plan
	MH*	Material Handling Plan
	PP*	Piping Plan
	QP	Equipment Plan
	SC	Section
	SH	Schedule
	SP*	Specialty Piping Plan
	XD*	Existing/Demolition Plan
<i>Electrical</i>		
	AL*	Airfield Lighting Plan
	AP*	Auxiliary Power Plan
	CP*	Exterior Communication Systems Plan
	DG	Diagram
	DT	Detail
	EU*	Electrical Utilities Plan
	GP*	Grounding System Plan
	LG*	Legend

Table 4 (Concluded)		
Discipline	Code	Definition
<i>Electrical (Continued)</i>		
	LP*	Lighting Plan
	PP*	Power Plan
	SH	Schedule
	SS*	Special Systems Plan
	XD*	Existing/Demolition Plan
<i>Telecommunications</i>		
	DG	Diagram
	DT	Detail
	LG*	Legend
	SH	Schedule
	TP*	Telephone/Data Plan
	XD*	Existing/Demolition Plan

* = Not in NCS 2.0

These revisions would not be made on existing as-built model files, but on copies to ensure the original as-builts are not modified.

A new model file type, Existing/Demolition (XD*, where * means this type is not in NCS 2.0), has been added to the standard to allow users to make revisions to as-built files. This model file type is used to aid users in separating existing to remain items from items that will be demolished (for more information on the demolition levels/layers, see Chapter 4, “Demolition levels/layers”).

Example: An Architect has an existing as-built Floor Plan model file for Building 1000, 2nd floor. For the current project, walls will be demolished and new walls constructed on the 2nd floor. First, a copy would be made of the original as-built file (B1000A-FPF2XX.dgn/dwg), which would be renamed to B1000RENA-XDF2XX.dgn/dwg (B1000REN is the Project Code, A- is the Discipline Designator, XD is the Model File Type (Existing/Demolition), and F2XX are user definable characters (F2=Floor 2)). The architect would open this file and move all demolition items to the first demolition

level/layer at that level/layer's correct symbology (if phased demolition is involved, the other levels/layers would be used). When the new items are drawn, the architect would open a new model file called something like

B1000RENA-FPF2XX.dgn/dwg

(B1000REN is the Project Code, A- is the Discipline Designator, FP is the Model File Type (Floor Plan), and F2XX are user definable characters (F2=Floor 2)). The file

B1000RENA-XDF2XX.dgn/dwg

would be referenced in with the Demolition levels/layers turned off. The architect would then use the Floor Plan active levels/layers to construct the new items for that project.

Sheet file naming convention

The sheet file naming convention (Figure 6) has one optional field, followed by four mandatory fields. Similar to the format for model file naming, the first field is optional, while the remaining fields must be used and in the correct sequence.

The first field is entirely optional and can be used for a 0 to 20-character *Project Code* (see "Model File naming convention"). The next two characters are the *Discipline Designator with Level 2 Designator* (see Table 5). The next character is the *Sheet Type Designator* (see Table 6) followed by a two-character *Sheet Sequence Number* (01-99). The remaining three characters are user-definable.

Table 5
Discipline Designators with Level 2 Designators

Discipline	Designator	Description	Content
General			
	G-	All General	All or any portion of subjects in the following Level 2 Designators
	GI	General Informational	Drawing index, code summary, symbol legend, orientation maps
	GC	General Contractual	Phasing, schedules, contractor staging areas, fencing, haul routes, erosion control, temporary and special requirements
	GR	General Resource	Photographs, soil borings
Hazardous Materials			
	H-	All Hazardous Materials	All or any portion of subjects in the following Level 2 Designators
	HA	Asbestos	Asbestos abatement, identification, or containment
	HC	Chemicals	Toxic chemicals handling, removal or storage
	HL	Lead	Lead piping or paint removal
	HP	PCB	PCB containment and removal
	HR	Refrigerants	Ozone depleting refrigerants
Survey/Mapping			
	V-	All Survey/Mapping	All or any portion of subjects in the following Level 2 Designators
	VA	Aerial Survey	
	VF	Field Survey	
	VH*	Hydrographic Survey	
	VI	Digital Survey	
	VU	Combined Utilities	
Geotechnical			
	B-	All Geotechnical	
Civil Works			
	W-	All Civil Works	
Civil			
	C-	All Civil	All or any portion of subjects in the following Level 2 Designators
	CD	Civil Demolition	Structure removal and site clearing
	CS	Civil Site	Plats, dimension control
	CG	Civil Grading	Excavation, grading , drainage, erosion control
	CP	Civil Paving	Roads, driveways, parking lots
	CI	Civil Improvements	Pavers, flagstone, exterior tile, furnishings, retaining walls, and water features
	CT	Civil Transportation	Waterways, wharves, docks, trams, railways, airfields, and people movers
	CU	Civil Utilities	Water, sanitary sewer, storm sewer, power, communications, fiber optic, telephone, cable television, natural gas, and steam systems

Table 5 (Continued)

Discipline	Designator	Description	Content
Landscape			
	L-	All Landscape	All or any portion of subjects in the following Level 2 Designators
	LD	Landscape Demolition	Protection and removal of existing landscaping
	LI	Landscape Irrigation	
	LP	Landscape Planting	
Structural			
	S-	All Structural	All or any portion of subjects in the following Level 2 Designators
	SD	Structural Demolition	Protection and removal
	SS	Structural Site	
	SB	Structural Substructure	Foundations, piers, slabs, and retaining walls
	SF	Structural Framing	Floors and roofs
Architectural			
	A-	All Architectural	All or any portion of subjects in the following Level 2 Designators
	AD	Architectural Demolition	Protection and removal
	AS	Architectural Site	
	AE	Architectural Elements	General architectural
	AI	Architectural Interiors	
	AF	Architectural Finishes	
	AG	Architectural Graphics	
Interiors			
	I-	All Interiors	All or any portion of subjects in the following Level 2 Designators
	ID	Interior Demolition	
	IN	Interior Design	
	IF	Interior Furnishings	
	IG	Interior Graphics	Murals and visuals
Equipment			
	Q-	All Equipment	All or any portion of subjects in the following Level 2 Designators
	QA	Athletic Equipment	Gymnasium, exercise, aquatic, and recreational
	QB	Bank Equipment	Vaults, teller units, ATMs, drive-through
	QC	Dry Cleaning Equipment	Washers, dryers, ironing, and dry cleaning
	QD	Detention Equipment	Prisons and jails
	QE	Educational Equipment	Chalkboards, library
	QF	Food Service Equipment	Kitchen, bar, service, storage, and processing
	QH	Hospital Equipment	Medical, exam, and treatment
	QL	Laboratory Equipment	Science labs, planetariums, observatories
	QM	Maintenance Equipment	Housekeeping, window washing, and vehicle servicing
	QP	Parking Lot Equipment	Gates, ticket, and card access

Table 5 (Continued)

Discipline	Designator	Description	Content
Equipment (Continued)			
	QR	Retail Equipment	Display, vending, and cash register
	QS	Site Equipment	Bicycle racks, benches, playgrounds
	QT	Theatrical Equipment	Stage, movie, rigging systems
	QV	Video/Photographic Equipment	Television, darkroom, and studio
	QY	Security Equipment	Access control and monitoring, surveillance
Fire Protection			
	F-	All Fire Protection	All or any portion of subjects in the following Level 2 Designators
	FA	Fire Detection and Alarm	
	FX	Fire Suppression	Fire extinguishing systems and equipment
Plumbing			
	P-	All Plumbing	All or any portion of subjects in the following Level 2 Designators
	PD	Plumbing Demolition	Protection, termination, and removal
	PS	Plumbing Site	Extensions and connections to Civil Utilities
	PP	Plumbing Piping	Piping, valves, and insulation
	PQ	Plumbing Equipment	Pumps and tanks
Process			
	D-	All Process	All or any portion of subjects in the following Level 2 Designators
	DD	Process Demolition	Protection, termination, and removal
	DS	Process Site	Extension and connection to civil utilities
	DL	Process Liquids	Liquid process systems
	DG	Process Gases	Gaseous process systems
	DP	Process Piping	Piping, valves, insulation, tanks pumps, etc.
	DQ	Process Equipment	Systems and equipment for thermal, electrical, materials handling, assembly and manufacturing, nuclear, power generation, chemical, refrigeration, and industrial processes
	DE	Process Electrical	Electrical exclusively associated with a process and not the facility
	DI	Process Instrumentation	Instrumentation, measurement, recorders, devices and controllers (electrical and mechanical)
Mechanical			
	M-	All Mechanical	All or any portion of subjects in the following Level 2 Designators
	MD	Mechanical Demolition	Protection, termination, and removal
	MS	Mechanical Site	Utility tunnels and piping between facilities
	MH	Mechanical HVAC	Ductwork, air devices, and equipment
	MP	Mechanical Piping	Chilled and heated water, steam
	MI	Mechanical Instrumentation	Instrumentation and controls

Table 5 (Concluded)

Discipline	Designator	Description	Content
Electrical			
	E-	All Electrical	All or any portion of subjects in the following Level 2 Designators
	EA*	Electrical Airfield Lighting and Navaids	Visual air navigation systems
	ED	Electrical Demolition	Protection, termination, and removal
	ES	Electrical Site	Exterior electrical systems (power, lighting, telecommunications, auxiliary)
	EP	Electrical Interior Power	Interior power
	EL	Electrical Interior Lighting	Interior lighting
	EI	Electrical Instrumentation	Controls, relays, instrumentation, and measurement devices
	ET	Electrical Interior Telecommunications	Interior telecommunications (telephone, network, voice and data cables)
	EY	Electrical Interior Auxiliary Systems	Interior auxiliary (alarms, nurse call, security, CCTV, PA, music, clock, and program)
Telecommunications			
	T-	All Telecommunications	All or any portion of subjects in the following Level 2 Designators
	TD*	Telecommunications Demolition	Protection, termination, and removal
	TN	Data Networks	Network cabling and equipment
	TT	Telephone	Telephone systems, wiring, and equipment
Resource			
	R-	All Resource	All or any portion of subjects in the following Level 2 Designators
	RC	Resource Civil	Surveyor's information and existing civil drawings
	RS	Resource Structural	Existing facility structural drawings
	RA	Resource Architectural	Existing facility architectural drawings
	RM	Resource Mechanical	Existing facility mechanical drawings
	RE	Resource Electrical	Existing facility electrical drawings
Other Disciplines	X		
Contractor/Shop Drawings	Z		
Operations	O		
* = Not in NCS 2.0			

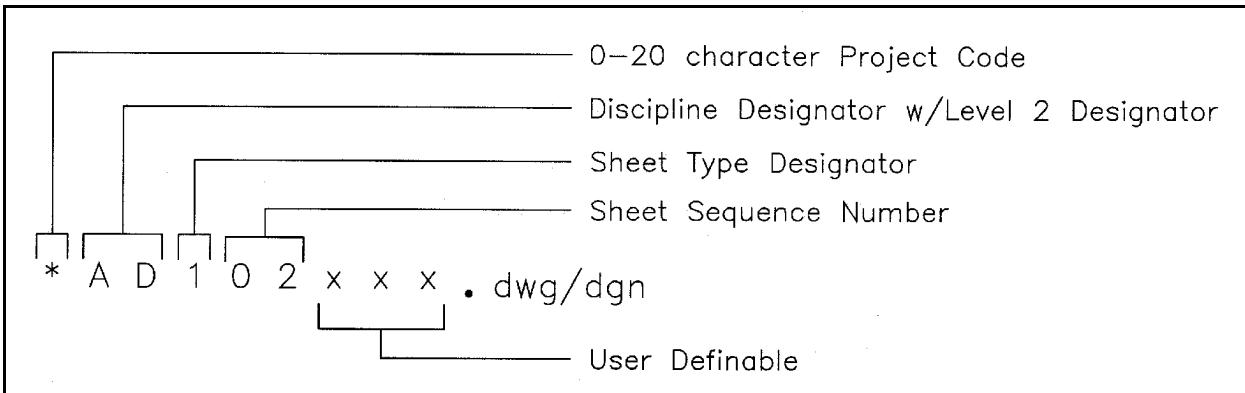


Figure 6. Sheet file naming convention

Table 6
Sheet Type Designators

Sheet Type	Designator
General (symbols legend, notes, etc.)	0
Plans (horizontal views)	1
Elevations (vertical views)	2
Sections (sectional views)	3
Large Scale Views (plans, elevations, or sections that are not details)	4
Details	5
Schedules and Diagrams	6
User Defined	7
User Defined	8
3D Representations (isometrics, perspectives, photographs)	9

Note: If the sheet sequence number goes above 99 sheets for a particular discipline, the first character in the User Definable field could be used to expand the limit of sheets per discipline to 999. However, if more than 99 sheets are required for one discipline's drawings, the user might want to consider using the Level 2 Designator in the Discipline Designator to further subdivide the discipline (see Table 5).

Note: Occasionally, more than one Sheet Type (e.g., plan, elevation, detail) will be represented in one sheet file. If this is the case, the dominant sheet type determines the Sheet Type Designator.

Example: The sheet file name for a project at ERDC, Building 8000, 1st floor, Quadrant B, Architectural Floor Plan, sheet sequence 02 could be:

ERDC8000A-102F1B.dgn/dwg

where ERDC8000 is the Project Code, A- is the Discipline Designator, 1 is the Sheet Type Designator (Plan), 02 is the Sheet Sequence Number, and F1B is a user-definable set of characters for Floor 1, Quadrant B.

Coordination Between Sheet File Name and Sheet Identifier

In assigning a sheet identifier (for use in the sheet identification block, reference bubbles, etc.), the user should coordinate with the name assigned to the electronic sheet file. The sheet identifier should consist of the discipline designator, sheet type designator, and the sheet sequence number (Figure 7).

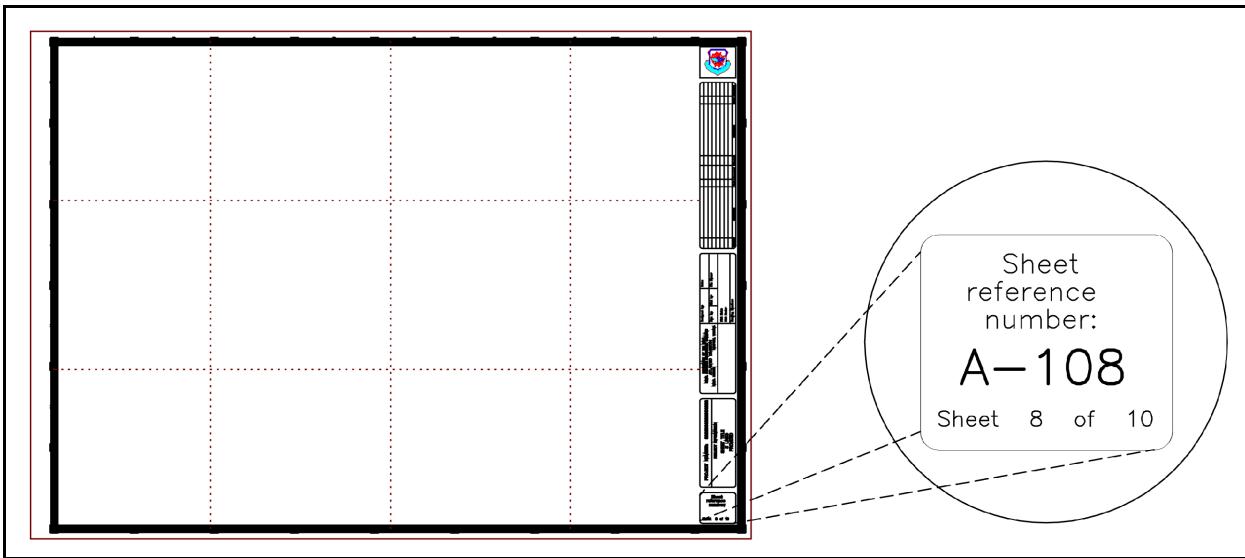


Figure 7. Typical border sheet title block with sheet identification block

As far as the sequence of the discipline designators in a drawing set, the National CAD Standard mandates that the disciplines follow the order as shown in Table 3.

3 Graphic Concepts

Presentation Graphics

The first step in establishing an effective CADD standard is the development of a uniform approach to presentation graphics. Presentation graphics typically consist of drawing elements such as lines, arcs, shapes, text, and their attributes (line color, line width, and line style). This chapter presents brief overviews of the characteristics of presentation graphics and the philosophy used to standardize them.

Line widths

Although “monotone” line work is not contractually improper, varied line widths substantially improve readability. Most commercial CADD systems provide an extensive variety of line widths. However, for the majority of A/E/C drawings, the five line widths defined

in Table 7, with the optional 1.00 mm, 1.40 mm, and 2.00 mm lines, are considered sufficient and should not be expanded unless an appreciable improvement in drawing clarity or contrast can be realized. The following are typical usages for the line widths shown in Table 7:

- Fine (0.18 mm). Fine lines should be used sparingly, mostly for poche/patterning (this line thickness typically does not reproduce well in blue-line format and/or in photocopies).
- Thin (0.25 mm). Thin lines should be used for depicting dimension lines, dimension leader/witness lines, note leader lines, line terminators (arrowheads, dots, slashes), phantom lines, hidden lines, center lines, long break lines, schedule grid lines, and object lines seen at a distance.

Table 7
Comparison of Line Widths

Line Thickness	Technical Pen Designation ¹	mm	in.	MicroStation Line Weight ²	Line Weight Example
Fine	0000	0.18	0.007	wt = 0	
Thin	000	0.25	0.010	wt = 1	
Medium	0	0.35	0.014	wt = 2	
Wide	1	0.50	0.020	wt = 3	
Extra Wide	2.5	0.70	0.028	wt = 5	
Option 1	3.5	1.00	0.040	wt = 7	
Option 2 ³	n/a	1.40	0.055	wt = 10	
Option 3 ³	n/a	2.00	0.079	wt = 15	

¹ Technical pen designation derived from Rapidograph and Rotring pen sizes.

² The weight of MicroStation lines remains constant when plotted, no matter if the design is scaled up or down.

³ Pens not standard for ink pen plotters.

- Medium (0.35 mm). Medium lines should be used for depicting minor object lines, dimension text, text for notes/callouts, and schedule text.
- Wide (0.50 mm). Wide lines should be used for major object lines, cut lines, section cutting plane lines, and titles.
- Extra wide (0.70 mm). Extra wide lines should be used for minor title underlining, schedule outlines, large titles, and object lines requiring special emphasis. For very large scale details drawn at 3 in. = 1 ft-0 in. or larger, the extra wide width should be used for the object lines. Extra wide widths are also appropriate for use as an elevation grade line, building footprint, or top of grade lines on section/foundation details.
- Option 1 (1.00 mm). This line weight should be used for major title underlining and separating portions of drawings.
- Option 2 (1.40 mm). This line weight should be used for border sheet outlines and cover sheet line work, and as an option for the designer as required.
- Option 3 (2.00 mm). This line weight should be used for border sheet outlines and cover sheet line work and as an option for the designer as required.

Line types/styles

The line types/styles selected for this standard are listed in Table 8. Only line IDs 0, 2, 7 and 11 are included in ISO 128 (ISO 1982). The CGTC has created line style files for MicroStation and AutoCAD (called tsaec.rsc and tsaec.lin, respectively) which include the line styles in Table 9, as well as additional discipline line styles. Appendix D contains additional line styles utilized in the standard. These files are available on the Release 2.0 CD, as well as on the CGTC's Internet site at tsc.wes.army.mil.

Table 8
Standard Line Types/Styles

ID	Description	Example	MicroStation Designator	AutoCAD Designator
0	Continuous	—	0	Continuous
1	Dotted	· · · · ·	1	ACAD_ISO07W100
2	Dashed	- - - - -	2	ACAD_ISO02W100
3	Dashed spaced	— — — — —	3	ACAD_ISO03W100
4	Dashed dotted	· - - - - - -	4	ACAD_ISO10W100
6	Dashed double-dotted	· - - - - - - -	6	ACAD_ISO12W100
10	Dashed triple-dotted	— - - - - - - -	¹	ACAD_ISO14W100
7	Chain	- - - - -	7	ACAD_ISO08W100
11	Chain double-dashed	- - - - - - -	¹	ACAD_ISO09W100

¹ This line style is not found in the default MicroStation line style resource file.

Line color

The primary reason to use color in CADD drawings is to improve the clarity of the drawing on a computer monitor. The variety of colors available in a CADD application depends on the capabilities of the computer monitor and its video card. Today, most systems are capable of displaying from 16 to 256 colors. Based on the limitations of monitor color display capabilities and differing CADD system plotting methods, this manual recommends that all A/E/C drawings be created using the basic colors presented in Table 9 whenever possible.

Note: *The recommended colors are best viewed on a monitor with a black background.*

Appendix C contains a 256-color map for the AutoCAD and MicroStation color palettes. The table maps AutoCAD's default color palette to MicroStation's default color palette. The color table is provided for those users who require more colors than the eight recommended by this standard.

Screening

Screened images are created through a process in which the density and pattern of black and white dots are varied to simulate different shades of gray. Varying the intensity of gray scales allows users to distinguish different aspects of a drawing when it is plotted. For example, an area on a site designated for demolition can be assigned a color that has been assigned a screening percentage. When plotted, the area will be shown at a lighter shade compared with other elements in the drawing. This will allow the contractor to immediately identify the demolition area on the drawing.

Table 10 lists colors recommended to be used for screening along with a recommended screening percentage. Using Table 10, MicroStation users can edit a plotter driver, using a text editor, to assign a screening percentage to the specific colors (see the MicroStation user's manuals for information on working with plotter/printer drivers).

Table 9
Screen Color Comparison

Color	Color Number		Ratios of RGB, %		
	AutoCAD	MicroStation	Red	Green	Blue
Blue	5	1	0	0	255
Gray	8	9	128	128	128
Green	3	2	0	255	0
Red	1	3	255	0	0
Yellow	2	4	255	255	0
Magenta	6	5	255	0	255
Cyan	4	7	0	255	255
White	7	0	255	255	255

Note: Color numbers for AutoCAD and MicroStation were taken from default color tables.

Table 10
Screened Colors

AutoCAD				MicroStation			Gray Scale Ratios (RGB), percent		
Color No.	Line Width mm	Line Width in.	Screen percent	Color No.	Line Weight	Screen percent	Red	Green	Blue
10	0.18	0.007	10	10	0	10	230	230	230
11	0.25	0.010	10	19	1	10	230	230	230
12	0.35	0.014	10	27	2	10	230	230	230
13	0.50	0.020	10	35	3	10	230	230	230
14	0.70	0.028	10	43	5	10	230	230	230
15	1.00	0.039	10	51	7	10	230	230	230
16	1.40	0.055	10	59	10	10	230	230	230
19	2.00	0.079	10	83	15	10	230	230	230
50	0.18	0.007	20	20	0	20	204	204	204
51	0.25	0.010	20	28	1	20	204	204	204
52	0.35	0.014	20	36	2	20	204	204	204
53	0.50	0.020	20	44	3	20	204	204	204
54	0.70	0.028	20	52	5	20	204	204	204
55	1.00	0.039	20	60	7	20	204	204	204
56	1.40	0.055	20	68	10	20	204	204	204
59	2.00	0.079	20	92	15	20	204	204	204
90	0.18	0.007	30	82	0	30	179	179	179
91	0.25	0.010	30	106	1	30	179	179	179
92	0.35	0.014	30	92	2	30	179	179	179
93	0.50	0.020	30	122	3	30	179	179	179
94	0.70	0.028	30	114	5	30	179	179	179
95	1.00	0.039	30	138	7	30	179	179	179
96	1.40	0.055	30	130	10	30	179	179	179
99	2.00	0.079	30	170	15	30	179	179	179
130	0.18	0.007	40	87	0	40	153	153	153
131	0.25	0.010	40	95	1	40	153	153	153
132	0.35	0.014	40	103	2	40	153	153	153
133	0.50	0.020	40	111	3	40	153	153	153
134	0.70	0.028	40	119	5	40	153	153	153
135	1.00	0.039	40	127	7	40	153	153	153
136	1.40	0.055	40	135	10	40	153	153	153
139	2.00	0.079	40	159	15	40	153	153	153
170	0.18	0.007	50	97	0	50	128	128	128
171	0.25	0.010	50	105	1	50	128	128	128
172	0.35	0.014	50	113	2	50	128	128	128
173	0.50	0.020	50	121	3	50	128	128	128
174	0.70	0.028	50	129	5	50	128	128	128
175	1.00	0.039	50	137	7	50	128	128	128
176	1.40	0.055	50	145	10	50	128	128	128
179	2.00	0.079	50	169	15	50	128	128	128
210	0.18	0.007	50	85	0	50	128	128	128
211	0.25	0.010	50	109	1	50	128	128	128
212	0.35	0.014	50	101	2	50	128	128	128
213	0.50	0.020	50	125	3	50	128	128	128
214	0.70	0.028	50	117	5	50	128	128	128
215	1.00	0.039	50	141	7	50	128	128	128
216	1.40	0.055	50	133	10	50	128	128	128
219	2.00	0.079	50	173	15	50	128	128	128
250	0.25	0.010	50	8	1	50	128	128	128
251	0.35	0.014	50	200	2	50	128	128	128
252	0.50	0.020	50	168	3	50	128	128	128
253	0.70	0.028	50	120	5	50	128	128	128
254	1.00	0.039	50	56	7	50	128	128	128
255	2.00	0.079	50	24	15	50	128	128	128

AutoCAD users must specify requirements for screening according to the output device used. Due to the number of output devices AutoCAD supports, users should consult the help documentation provided within AutoCAD for information on assigning recommended screening percentages.

Text styles/fonts

Contrasting text styles (or fonts) are used within a drawing to delineate types of information. In most A/E/C drawings, the five fonts shown in Table 11 should be sufficient.

- Monotext font. This font creates text characters that are evenly spaced. Monotext font should be used where text fields need to be aligned such as in schedules or, in some cases, title blocks. In AutoCAD, use the monotxt font and in MicroStation use Font #3.
- Proportional font. This font creates text where the characters are proportionally spaced. It is appropriate for general notes, labels, or title blocks. In AutoCAD, use the romans (Roman Simplex) font with a width factor of 0.8. In MicroStation use Font #1.
- Slanted font. A slanted font is used where text needs to be easily distinguished from other text. This font can be created in AutoCAD by using the romans font with the Obliquing Angle set to 21.8 deg to achieve the American Standard slope of 2 in 5 (68.2 deg). In MicroStation use Font #23.
- Filled font. Filled fonts are used primarily for titles and on cover sheets. For AutoCAD, the recommended font is the swiss TrueType font (Note: The TEXTFILL system variable needs to be set to “1”). MicroStation users should use Font #43 (the Microsoft arialbd.ttf font file can be used as an alternate text style for the filled font).

- Outline font. When a pen plotter is used for final output, the outline font is used as a substitute for filled fonts for major titles such as cover sheet information to save plotting time. For AutoCAD, the recommended font is the sasb (Sans Serif-bold) PostScript font. For MicroStation, use Font #42.

Plotting

Printers and plotters are controlled by files called pen tables or feature tables. These files (tables) convert thicknesses and/or color in an electronic file to line thicknesses on a paper drawing.

This manual standardizes presentation graphics as they relate to electronic drawing files (screen display) and not the final printed or plotted paper drawing. By employing pen tables, each agency can ensure that consistent drawings are produced from an electronic file regardless of the type of printer or plotter used. It is the responsibility of each field activity to develop pen tables based on the printer/plotter used at that activity.

Border Sheets

Sheet sizes

Typical A/E/C projects (contract documents) will be prepared on A1 sheets in accordance with the ISO sheet size shown in Table 12, which also shows American National Standards Institute (ANSI) equivalents (American Society of Mechanical Engineers (ASME) Y14.1 (1995)).

The ISO A0 sheet is recommended for large maps (i.e., installation master plans and drawings for civil works projects).

Table 11
Comparison of Font Types

MicroStation	AutoCAD
Monotext font (Font #3)	Monotext font (monotxt)
ABCDEFHIJKLMNOPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz	ABCDEFHIJKLMNOPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz
Proportional font (Font #1)	Proportional font (romans)
ABCDEFHIJKLMNOPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz	ABCDEFHIJKLMNOPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz
Slanted font (Font #23)	Slanted font (romans, obliquing angle = 21.8)
ABCDEFGHIJKLMNPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz	ABCDEFGHIJKLMNPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz
Filled font (Font #43)	Filled font (swiss)
ABCDEFGHIJKLMNPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz	ABCDEFGHIJKLMNPQRST UVWXYZ abcdefghijklmnopqrst uvwxyz
Outline font (Font #42)	Outline font (sasb)
ABCDEFGHIJKLMNPQRST UVWXZY abcdefghijklmnopqrst uvwxyz	ABCDEFGHIJKLMNPQRST UVWXZY abcdefghijklmnopqrst uvwxyz

Table 12**ISO, ANSI, and Architectural Sheet Size Comparison**

ISO Designation	Width		Length		ANSI Equivalent		Architectural Equivalent	
	mm	in.	mm	in.	Letter	in.	Letter	in.
NA	NA	NA	NA	NA	F	28.0 x 40.0	F	30.0 x 42.0
A0	841	33.11	1189	46.81	E	34.0 x 44.0	E	36.0 x 48.0
A1	594	23.39	841	33.11	D	22.0 x 34.0	D	24.0 x 36.0
A2	420	16.54	594	23.39	C	17.0 x 22.0	C	18.0 x 24.0
A3	297	11.69	420	16.54	B	11.0 x 17.0	B	12.0 x 18.0
A4	210	8.27	297	11.69	A	8.5 x 11.0	A	9.0 x 12.0

Note: Users plotting A1 size drawings on ANSI D-size paper should reduce the width of the A1 border from 594 mm (23.39 in.) to 559 mm (22.0 in.). The length can remain the same. This revised border will fit on an ANSI D-size sheet (22 by 34 in.) and can be reproduced on standard office photocopiers.

Title block

The CGTC recommends the use of a vertical title block placed in the right-hand margin of the border sheet as shown in Figure 8. Use of the vertical title block provides the most usable drawing space on a sheet. The vertical title block also ensures that the most prevalent and pertinent information remains at the bottom right of the sheet. In compliance with the *Uniform Drawing System* (CSI 2001), title block data will include the following:

- Designer identification block
- Issue block
- Management block
- Project identification block/sheet title block
- Sheet identification block

Note: Local standards may modify the content of the title block but should not alter its size or configuration if possible. See the Uniform Drawing System for additional recommendations.

Designer identification block. The designer identification block (Figure 9) contains the logo or name of the agency that designed the sheet. This space could also be expanded (by reducing the size of the issue block) to accommodate professional seals when required.

Issue block. The issue block (Figure 10) contains a history of revisions, addenda, and/or clarifications to the sheet. The first entry should be placed on the lower left-hand line of the issue block and subsequent entries should be made above it.

Management block. The management block (Figure 11) contains information about the designer, reviewer, and submitter. This block can also be used to maintain filing information about the drawing, such as the file name, plot scale, and drawing code (this information is sometimes plotted outside the drawing sheet cut line). If an A-E has developed the drawings, there is room for information about the firm in the lower left portion of the block.

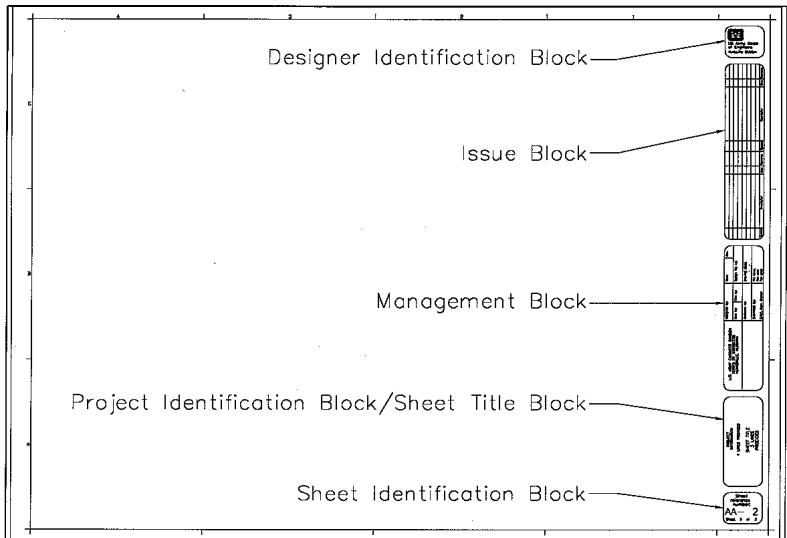


Figure 8. Sample metric drawing sheet with vertical title block

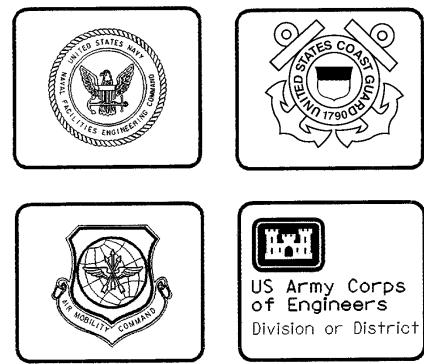


Figure 9. Designer identification block (typ.)

Mark	Description	Date	Apor.	Mark	Description	Date	Apor.

Figure 10. Issue block (typ.)

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS HUNTSVILLE, ALABAMA	Designed by:		Date:	Rev:
	Dwn by:	Ckd by:	Design file no.	
	Reviewed by:		Drawing code:	
	Submitted by:		File name: Plot date: Dwg scale:	

Figure 11. Management block (typ.)

Project identification block/sheet title block. The project identification block/sheet title block (Figure 12) contains two sets of information. First, the project name is identified, possibly with the location or phase of the project identified. If small enough, a project logo can be presented in this block. The second set of information contains a description of the content of the sheet (e.g., Architectural Floor Plan). If more than one type of information is presented on the sheet (i.e., plans, schedules, details), the most important information is identified.

Sheet identification block. The sheet identification block (Figure 13) contains the sheet identifier. This sheet identifier is composed of the discipline designator, the sheet type designator, and the sheet sequence number described in the section, “Electronic Drawing File Naming Conventions” (Chapter 2). The “number of sheets” listing is optional and can contain either the total number of sheets for the entire project drawing set or the number of sheets for that particular discipline designator.

Drawing Scales

Typical drawing scales for both SI and inch-pound measurements are indicated in Table 13.

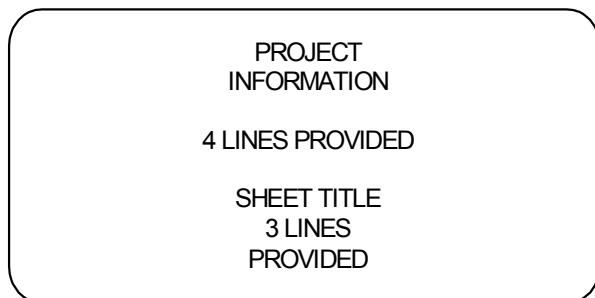


Figure 12. Project identification block/sheet title block

The A/E/C CADD Standard recommends text heights for these scales in accordance with Leroy lettering sizes. Table 14 lists recommended text sizes using inch-pound scales. Table 15 lists recommended text sizes using metric scales.

Dimensioning in Metric (SI)

Methodologies for dimensioning metric (SI) drawings are based upon the recommendations of the Construction Metrication Council of the National Institute of Building Sciences (NIBS), Washington, DC. These recommendations comply with the American Society for Testing and Materials (ASTM) E 621-94, “Standard Practice for the Use of Metric (SI) Units in Building Design and Construction” (ASTM 1999).

Millimeters

The preferred unit of measure for most A/E/C work is millimeters. Unit notations are unnecessary and should not be used. The dimension is provided as a whole number as shown in Figure 14. Also, a note should be added to the drawing stating, “All dimensions and/or dimensions shown in callouts/notes are in millimeters unless otherwise noted.”

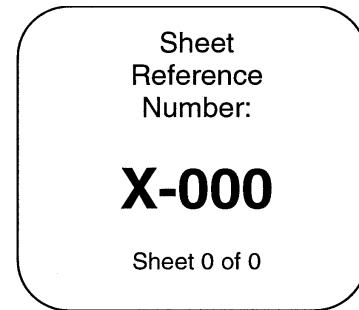


Figure 13. Sheet identification block

Table 13
Drawing Scales

Drawing Type	Metric	Inch-Pound
Site plans	1:200	1" = 20' - 0"
	1:400	1" = 30' - 0"
	1:500	1" = 40' - 0"
	1:600	1" = 50' - 0"
	1:700	1" = 60' - 0"
	1:1000	1" = 100' - 0"
	1:2000	1" = 200' - 0"
	1:5000	1" = 400' - 0"
	1:6000	1" = 500' - 0"
	1:10000	1" = 1000' - 0"
	1:20000	1" = 2000' - 0"
Floor plans	1:50	1/4" = 1' - 0"
	1:100	1/8" = 1' - 0"
	1:200	1/16" = 1' - 0"
Roof plan	1:200	1/16" = 1' - 0"
Exterior elevations	1:100	1/8" = 1' - 0"
	1:200	1/16" = 1' - 0"
Interior elevations	1:50	1/4" = 1' - 0"
	1:100	1/8" = 1' - 0"
Cross sections	1:50	1/4" = 1' - 0"
	1:100	1/8" = 1' - 0"
	1:200	1/16" = 1' - 0"
Wall sections	1:20	1/2" or 3/4" = 1' - 0"
Stair details	1:10	1" or 1-1/2" = 1' - 0"
Details	1:5	3" = 1' - 0"
	1:10	1" or 1-1/2" = 1' - 0"

Table 14
Inch-pound Text Sizes

Leroy Lettering Sizes	60	80	100	120	140	175	200	240	290	350	425	500	1000
Decimal Inch Equivalents	0.060	0.080	0.100	0.120	0.140	0.175	0.200	0.240	0.290	0.350	0.425	0.500	1.000
	Text Sizes In Feet And Inches												
Drawing Scale = 1" = 2000'-0"	120:0	160:0	200:0	240:0	280:0	350:0	400:0	480:0	580:0	700:0	850:0	1000:0	2000:0
Drawing Scale = 1" = 1000'-0"	60:0	80:0	100:0	120:0	140:0	175:0	200:0	240:0	290:0	350:0	425:0	500:0	1000:0
Drawing Scale = 1" = 500'-0"	30:0	40:0	50:0	60:0	70:0	87:6	100:0	120:0	145:0	175:0	212:6	250:0	500:0
Drawing Scale = 1" = 400'-0"	24:0	32:0	40:0	48:0	56:0	70:0	80:0	96:0	116:0	140:0	170:0	200:0	400:0
Drawing Scale = 1" = 200'-0"	12:0	16:0	20:0	24:0	28:0	35:0	40:0	48:0	58:0	70:0	85:0	100:0	200:0
Drawing Scale = 1" = 100'-0"	6:0	8:0	10:0	12:0	14:0	17:6	20:0	24:0	29:0	35:0	42:6	50:0	100:0
Drawing Scale = 1" = 60'-0"	3:7	4:10	6:0	7:2	8:5	10:6	12:0	14:5	17:5	21:0	25:6	30:0	60:0
Drawing Scale = 1" = 50'-0"	3:0	4:0	5:0	6:0	7:0	8:9	10:0	12:0	14:6	17:6	21:3	25:0	50:0
Drawing Scale = 1" = 40'-0"	2:5	3:2	4:0	5:0	5:8	7:0	8:0	9:8	11:8	14:0	17:0	20:0	40:0
Drawing Scale = 1" = 30'-0"	1:10	2:5	3:0	3:7	4:2	5:3	6:0	7:2	8:8	10:6	12:9	15:0	30:0
Drawing Scale = 1" = 20'-0"	1:2	1:7	2:0	2:5	2:10	3:6	4:0	4:10	5:10	7:0	8:6	10:0	20:0
Drawing Scale = 3" = 1'-0"	:0.2	:0.3	:0.4	:0.5	:0.6	:0.7	:0.8	:1	:1.2	:1.4	:1.7	:2	:4
Drawing Scale = 1-1/2" = 1'-0"	:0.5	:0.6	:0.8	:1	:1.1	:1.4	:1.6	:2	:2.3	:2.8	:3.4	:4	:8
Drawing Scale = 1" = 1'-0"	:0.7	:1	:1.2	:1.5	:1.7	:2.1	:2.4	:2.8	:3.5	:4.2	:5	:6	:10
Drawing Scale = 3/4" = 1'-0"	:1	:1.3	:1.6	:2	:2.2	:2.8	:3.2	:3.8	:4.6	:5.6	:7	:8	:14
Drawing Scale = 1/2" = 1'-0"	:1.5	:2	:2.4	:3	:3.4	:4.2	:4.8	:5.8	:7	:8.4	:10	:10	:20
Drawing Scale = 3/8" = 1'-0"	:2	:2.5	:3	:4	:4.5	:5.6	:6.4	:7.7	:9.3	:11	:11	:14	:28
Drawing Scale = 1/4" = 1'-0"	:3	:4	:5	:6	:7	:8.4	:9.6	:1.0	:1.2	:1.5	:1.8	:2.0	:40
Drawing Scale = 1/8" = 1'-0"	:6	:8	:10	:1.0	:1.1	:1.5	:1.7	:1.11	:2.4	:2.10	:3.5	:4.0	:80
Drawing Scale = 3/32" = 1'-0"	:8	:10	:1.0	:1.3	:1.6	:1.10	:2.1	:2.6	:3.1	:3.8	:4.6	:5.4	:108
Drawing Scale = 1/16" = 1'-0"	:1.0	:1.3	:1.7	:2.0	:2.3	:2.10	:3.2	:3.10	:4.8	:5.7	:6.10	:8.0	:160
Drawing Scale = 1/32" = 1'-0"	:2.0	:2.6	:3.2	:3.10	:4.6	:5.7	:6.5	:7.8	:9.4	:11.2	:13.7	:16.0	:320
Drawing Scale = FULL	:0.060	:0.080	:0.100	:0.120	:0.140	:0.175	:0.200	:0.240	:0.290	:0.350	:0.425	:0.500	:1.000

Table 15
Metric Text Sizes

Leroy Lettering Sizes Millimeter Approximates	60 1.5	80 2	100 2.5	120 3	140 3.5	175 4.5	200 5	240 6	290 7.5	350 9	425 11	500 12	1000 25
Text Sizes In Millimeters													
Drawing Scale = 1:20000	30000	40000	50000	60000	70000	90000	100000	120000	150000	180000	220000	240000	500000
Drawing Scale = 1:10000	15000	20000	25000	30000	35000	45000	50000	60000	75000	90000	110000	120000	250000
Drawing Scale = 1:6000	9000	12000	15000	18000	21000	27000	30000	36000	45000	54000	66000	72000	150000
Drawing Scale = 1:5000	7500	10000	12500	15000	17500	22500	25000	30000	37500	45000	55000	60000	125000
Drawing Scale = 1:2000	3000	4000	5000	6000	7000	9000	10000	12000	15000	18000	22000	24000	50000
Drawing Scale = 1:1000	1500	2000	2500	3000	3500	4500	5000	6000	7500	9000	11000	12000	25000
Drawing Scale = 1:700	1050	1400	1750	2100	2450	3150	3500	4200	5250	6300	7700	8400	17500
Drawing Scale = 1:600	900	1200	1500	1800	2100	2700	3000	3600	4500	5400	6600	7200	15000
Drawing Scale = 1:500	750	1000	1250	1500	1750	2250	2500	3000	3750	4500	5500	6000	12500
Drawing Scale = 1:400	600	800	1000	1200	1400	1800	2000	2400	3000	3600	4400	4800	10000
Drawing Scale = 1:200	300	400	500	600	700	900	1000	1200	1500	1800	2200	2400	5000
Drawing Scale = 1:100	150	200	250	300	350	450	500	600	750	900	1100	1200	2500
Drawing Scale = 1:50	75	100	125	150	175	225	250	300	375	450	550	600	1250
Drawing Scale = 1:20	30	40	50	60	70	90	100	120	150	180	220	240	500
Drawing Scale = 1:10	15	20	25	30	35	45	50	60	75	90	110	120	250
Drawing Scale = 1:5	7.5	10	12.5	15	17.5	22.5	25	30	37.5	45	55	60	125
Drawing Scale = 1:2.5	3.75	5	6.25	7.5	8.75	11.25	12.5	15	18.75	22.5	27.5	30	62.5
Drawing Scale = FULL	1.5	2	2.5	3	3.5	4.5	5	6	7.5	9	11	12	25

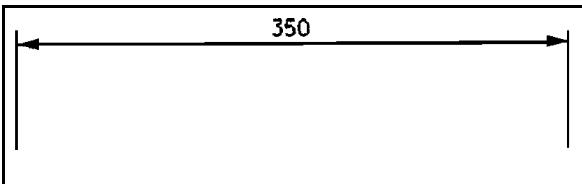


Figure 14. Dimension in millimeters. Always shown as a whole number

When meter measurements are included on the same sheet, the meter dimension is provided as a real number taken to three places past the decimal point (Figure 15). Again, unit notations are unnecessary.

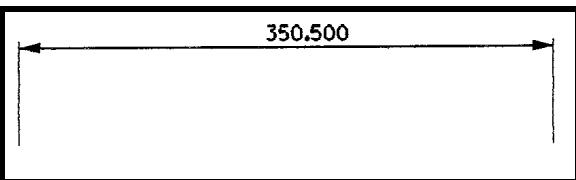


Figure 15. Dimension in meters. Always shown as a real number (with decimal)

Note: In circumstances where very small dimensions are used (e.g., machine details), it is permissible to use real numbers for millimeter dimensions. A note should be placed on the detail regarding this fact.

Meters

For site plans or other drawings drawn to scales over 1:200, the unit of measure is typically meters. Where greater accuracy is required, show dimensions to three decimal places (Figure 15). A note should be added to the drawing stating, "All dimensions and/or dimensions shown in callouts/notes are in meters unless otherwise noted."

Large units of measure

Commas shall not be used when providing large units of measure; instead, a space replaces the traditional comma in numbers containing

five or more digits (e.g., the number 45,000 is displayed as 45 000). In numbers containing four digits, no space is used (e.g., 5000). Both methods are shown in Figure 16.

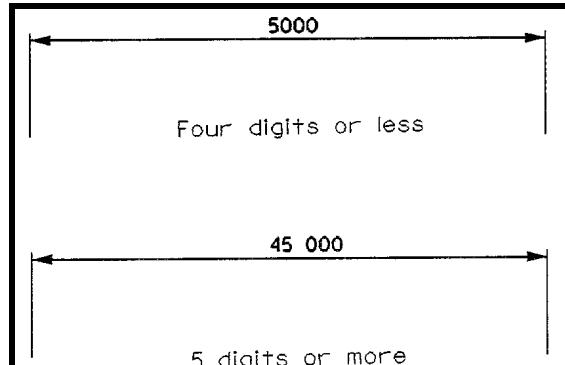


Figure 16. Proper dimension presentations for metric measurements with four or more digits

The Unit Separation toggle under the *Unit Format* setting for Dimension Settings can be used to add a space after the thousands place in a value (Figure 17). Since toggling this value on and off for drawing files containing varying dimension values would be tedious, recommend toggling Unit Separation "on" for files containing *any* dimension values over 5 digits and "off" for files containing dimension values with *only* 4 or fewer digits.

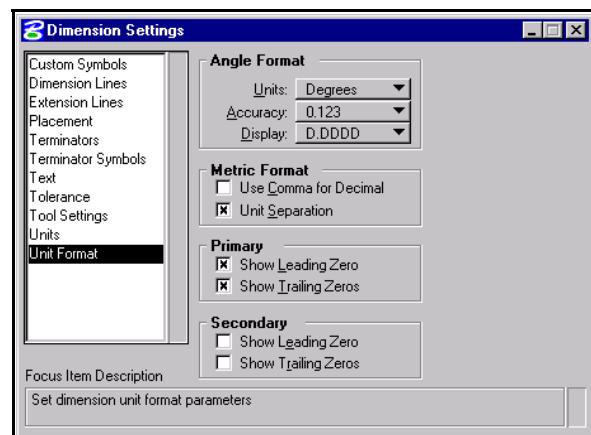


Figure 17. Unit format

Note: *The automatic dimensioning features of AutoCAD do not allow users to replace commas with spaces in dimension text. The dimension text will presently have to be edited to provide the spacing required by ASTM E 621-94 (ASTM 1999).*

Dual units

To avoid confusion, dual units (both inch-pound and metric) should not be used. As stated in Construction Metrication Council (1998), use

of dual units “increases dimensioning time, doubles the chance for errors, makes drawings more confusing, and only postpones the (metric) learning process.”

Exceptions to this include certain “standard building designs” where dual dimensions ensure that the design can be used in either SI or inch-pound projects and in situations where products/components used in an SI project are available only as inch-pound products.

4 Level/Layer Assignments

Levels/Layers

CADD levels or layers are analogous to overlays in manual drafting systems and serve to

separate graphic elements (lines, shapes, and text) according to the design discipline they represent (Figure 18).

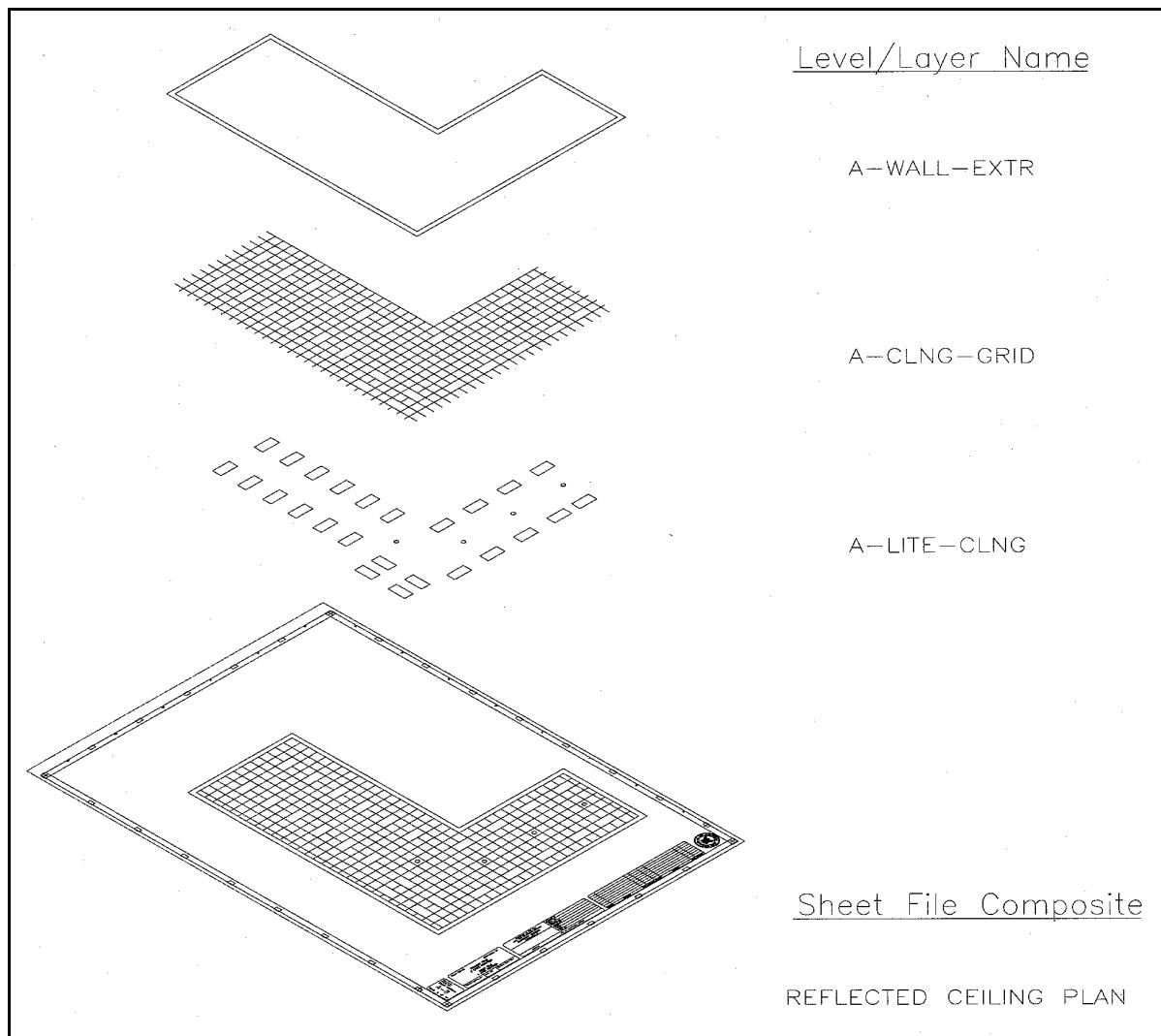


Figure 18. Typical levels/layers contained in a sheet file

The types of information represented by individual levels/layers can be grouped into two primary types: model-specific information and sheet-specific information (Figure 19).

- Model-specific information represents the physical form of a site, a building, or objects

composing a building. This information is often shared between drawings. Examples include walls, doors, light fixtures, and room numbers. Model-specific information may be either literal (e.g., walls) or symbolic (e.g., electrical outlets).

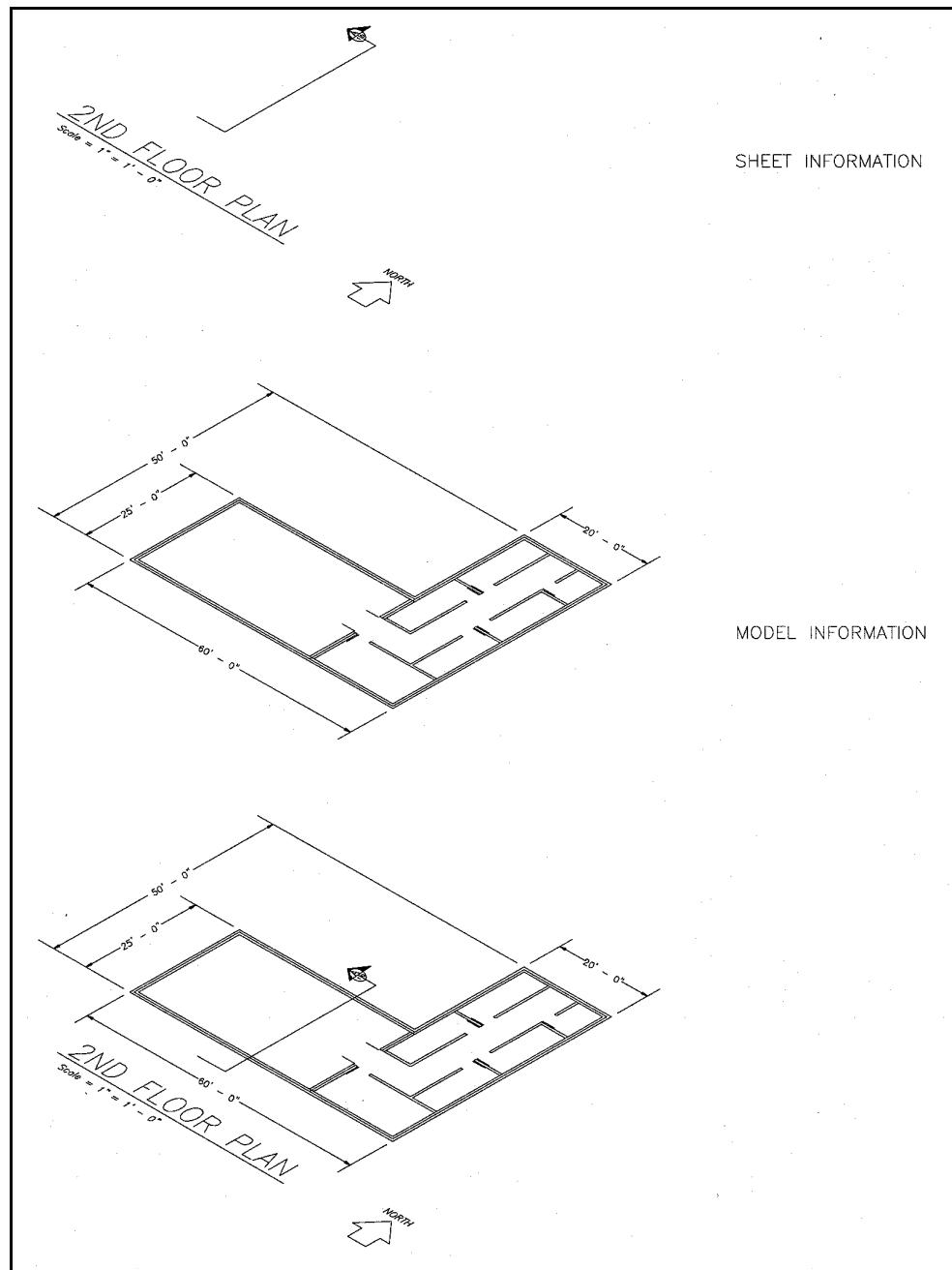


Figure 19. Sheet- and model-specific information

- Sheet-specific information may include notes, annotative symbols, and titles. This type of information is usually not shared between drawings.

To use and manipulate model-specific and sheet-specific information effectively, every level/layer must be defined (standardized) by its name and its use.

Level/layer naming convention

The reuse, not duplication, of graphic information reduces drawing time and improves project coordination. The level/layer is the basic tool used in CADD for managing graphic information. The levels/layers defined within these standards are based on the recommendations set forth in "AIA CAD Layer Guidelines" (AIA 2001).

Level/layer names consist of a two-character *Discipline Designator* (e.g., "A-" for Architectural, "M-" for Mechanical), followed by a four-character *Major Group* (e.g., "DOOR" for Doors, "LITE" for Lighting Fixtures), followed by four-character *Minor Group* (e.g., A-WALL-FULL-EXTR for exterior full height walls versus A-WALL-FULL-INTR for interior full height walls) (Figure 20).

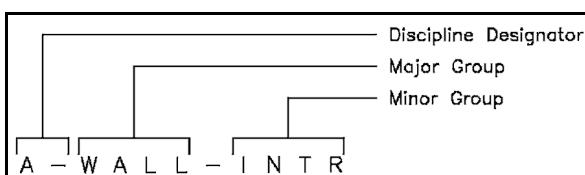


Figure 20. Level/layer naming format

ISO format

ISO 13567-2 (ISO 1998) presents an international method for level/layer naming (Figure 21). This method consists of 10 mandatory alphanumeric characters, followed by 10 optional alphanumeric characters. The first two-character field, *Agent Responsible*,

correlates to the AIA's Discipline Designator. The following six-character field, *Element*, can map to a shortened version of the AIA's Major and Minor Groups (e.g., DOOR-FULL becomes DOORFU, DOOR-PRHT becomes DOORPR). The final two-character field in the mandatory level/layer name, *Presentation*, designates whether the level/layer information is Model information (i.e., model-specific information) or Page/Paper information (i.e., sheet-specific information). Appendix A gives a corresponding ISO Format level/layer name for each AIA Format level/layer name.

Model Files

As mentioned in Chapter 2, model files represent full-size drawings of building elements, systems, or information (e.g., the mechanical HVAC system, the architectural floor plan, details, sections) and sheet files represent final plotted sheets. Model files are used as components in creating plotted sheet files. The information contained within a model file for a discipline may be referenced by other disciplines to create the particular model files or sheet files for that discipline.

A model file can be considered a "work in progress." For instance, a mechanical engineer may reference the architect's floor plan model file to begin development of the HVAC ductwork layout model file. Meanwhile, the architect can continue developing the floor plan to meet new requirements. Any changes to the floor plan would be immediately accessible to the mechanical engineer. The viewing of real-time updates eliminates a great deal of frustration for other disciplines because it allows for on-the-spot rather than after-the-fact modifications.

Level/layer assignment tables

The level/layer assignment tables in Appendix A present the following (Figure 22 presents an excerpt):

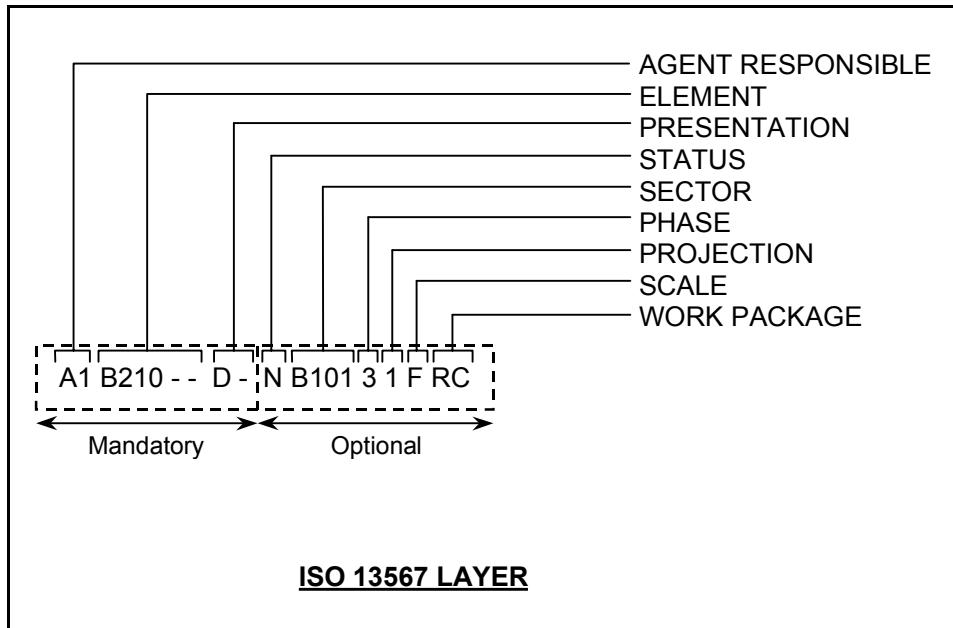


Figure 21. ISO 13567-2 level/layer naming method

- The levels/layers assigned to each model file.
- The level number assigned to each level/layer name (MicroStation users only).
- An AIA and corresponding ISO format level/layer name for each level/layer.
- A detailed description for each level/layer.
- The presentation graphics associated with each level/layer. This includes the line style, line width, and color.

Annotation levels/layers. Users should note that the first eight level/layers for every model file type (with the exception of detail model file types) are the same, the only difference being that the Discipline Designator changes depending on the discipline for that model file type. The unique function of these eight annotation levels/layers is to contain model-specific information that might not be required by other disciplines. These levels/layers are as follows with ** representing a Discipline Designator (e.g., A-, C-):

- **ANNO-DIMS Witness/extension lines, dimension terminators and dimension text.
- **ANNO-KEYN Reference keynotes with associated leaders.
- **ANNO-NOTE General notes and remarks.
- **ANNO-NPLT Non-plotting graphic information.
- **ANNO-PATT Miscellaneous patterning and hatching.
- **ANNO-SYMB Miscellaneous symbols.
- **ANNO-TEXT Miscellaneous text and callouts with associated leaders.
- **ANNO-REFR An AutoCAD user-specific layer for use in attachment of external references (i.e., reference files).

Demolition levels/layers. Users should note that several model files have three levels/layers reserved for demolition items. These levels/layers are as follows with ** representing a Discipline Designator (e.g., A-, C-):

Discipline: Architectural
Model File Type: Floor Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Floor Information						
10	A-FLOR-IDEN	A-FLORIDM-	Room name, space identification text	0	0.25	G/3 G/2
11	A-FLOR-NUMB	A-FLORNUM-	Room/space identification number and symbol	0	0.25	G/3 G/2
12	A-FLOR-FIXT	A-FLORFIM-	Floor mounted/Free standing miscellaneous fixtures	0	0.25	G/3 G/2
13	A-FLOR-LEVL	A-FLORLEM-	Level changes, shafts, ramps, pits, breaks in construction, and depressions	0	0.35	M/6 M/5
15	A-FLOR-OTLN	A-FLOROTM-	Floor outline/perimeter/building footprint	0	0.35	M/6 M/5
16	A-FLOR-PATT	A-FLORPAM-	Paving, tile, carpet patterns	0	0.18	Gr/8 Gr/9
17	A-FLOR-RAIS	A-FLORRAM-	Access (raised) flooring	0	0.25	G/3 G/2
18	A-FLOR-RPRM	A-FLORRPM-	Room perimeter shape (Interior walls)	0	0.35	Y/2 Y/4
19	A-FLOR-SIGN	A-FLORSIM-	Signage	0	0.25	R/1 R/3
20	A-FLOR-SPCL	A-FLORSPM-	Architectural specialties (e.g., toilet room accessories, display cases)	0	0.25	G/3 G/2

Figure 22. Model file level/layer assignment table

```
**STAT-DEMO-PHS1
Demolition - phase 1.
**STAT-DEMO-PHS2
Demolition - phase 2.
**STAT-DEMO-PHS3
Demolition - phase 3.
```

These levels/layers should only be used when an Existing/Demolition model file is being created (see Chapter 2, "Model File naming convention"). For instance, the architect or engineer will sometimes have existing as-built model files, such as Site Plans and Floor Plans from a previous project. A copy of the as-built file will be made for use in the current project. This copy is renamed to be the Existing/Demolition Plan model file for that discipline. In order to distinguish items to be demolished from existing items that will remain, those items should be moved to the Demolition levels/layers (if the demolition is not phased, all items should be moved to the **STAT-DEMO-PHS1 level/layer). When the Existing/Demolition Plan model file is referenced into a new file to create the New construction items, the Demolition levels/layers would be turned off.

Border sheets

As mentioned before, a model file contains information that can be referenced by other disciplines to create other model files or final sheet files. A border sheet model file contains border sheet linework, the title block, and project-specific symbols and text. Typically, each discipline will use the same border sheet and fill in sheet-specific information within the title block or revision block prior to printing the final sheet file (e.g., sheet number, designer names).

Reference files (XREFs)

Reference files (external references or XREFs) enable designers to share drawing information electronically, eliminating the need to exchange hard copy drawings between the design disciplines. With the use of reference files, the structural engineer need not wait for the architect to complete the architectural floor plans before beginning the structural framing plan model file. Nor does the engineer have to redraw the architect's structural walls on the structural framing plan model file.

Referencing electronic drawing information makes any future changes made by the architect apparent to the structural designer. This real-time access to the work of others ensures accuracy and consistency within a set of drawings and helps promote concurrent design efforts. No longer does one discipline have to wait until another discipline is nearly finished before they begin their drawings.

The use of reference files is a key component in the successful use of the level/layer assignments. To create either a model file or a final sheet file, multiple referenced model files may be required. Figure 23 shows how a simple Plumbing Piping Plan model file is developed using levels/layers referenced from the Enlarged Floor Plan model file. These referenced levels/layers show the current locations of walls, toilets, and sinks placed by the architect. The engineer uses this information to design the piping system required to service the plumbing fixtures. The architectural floor plan would then be detached and the Plumbing Piping Plan would be saved as a separate model file.

Sheet Files

Sheet files are the final project sheets that are ready to be plotted. A sheet file is an assembly of referenced model files plus additional sheet-specific information (e.g., north arrows, scales, section cuts, title block information).

Level/layer assignment tables

The level/layer assignment tables in Appendix B present the following (Figure 24):

- The levels/layers assigned to each sheet file.
- The level number assigned to each level/layer (MicroStation users only).
- An AIA and corresponding ISO format level/layer name for each level/layer.
- A detailed definition for each level/layer.

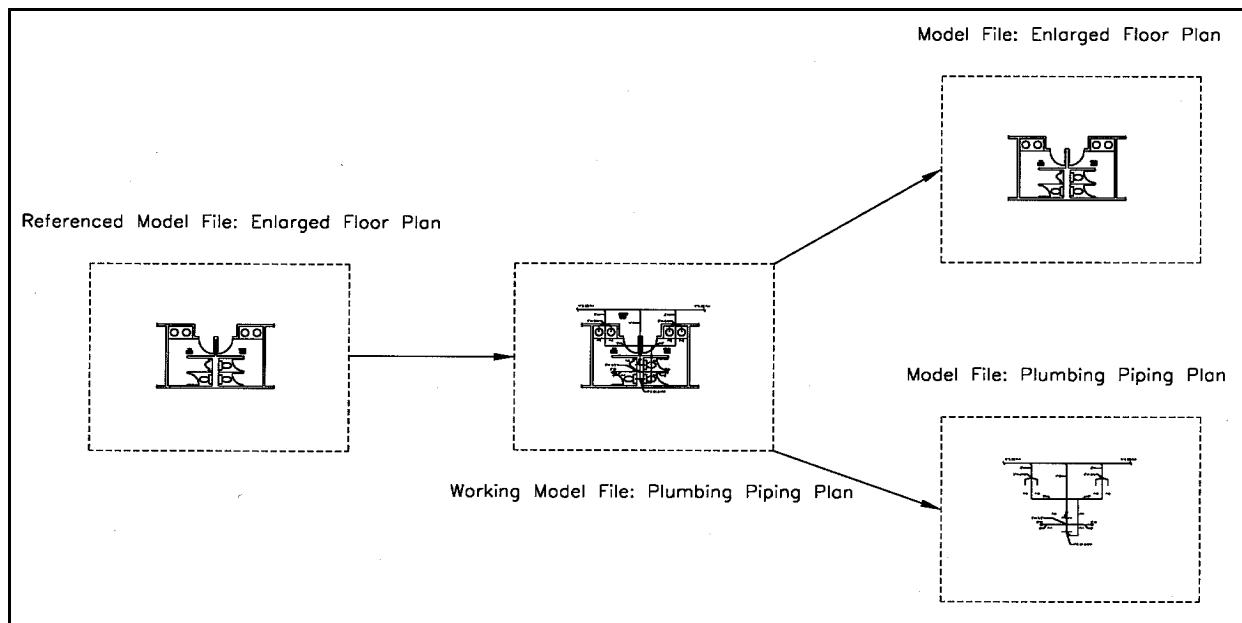


Figure 23. Using referenced model files to build a new model file without redundant effort

Discipline: Architectural

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color#	MicroStation Line Color
General Information							
1	A-ANNO-DIMS	A----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	A-ANNO-KEYN	A----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	A-ANNO-LEGN	A----LEP-	Legends and schedules	0	V	V	V
4	A-ANNO-PATT	A----PAP-	Sheet-specific patterning, cross-hatching, poche (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	A-ANNO-NOTE	A----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	A-ANNO-SYMB	A----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M/6	M/5
7	A-ANNO-TEXT	A----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	A-ANNO-REDL	A----REP-	Redlines	0	0.25	R/1	R/3
63	A-ANNO-REVS	A----RVP-	Revisions	0	0.50	C/4	C/7
NA	A-ANNO-REFR	A----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Figure 24. Sheet file level/layer assignment table

- The presentation graphics associated with each level/layer. This includes the line style, line width, and color.

Users should note that the first ten level/layers of the sheet file type for every discipline are the same, with the exception that the Discipline Designator changes depending on the discipline for that sheet file type. The unique function of these ten Annotation levels/layers is to contain sheet-specific information. These levels/layers are as follows with ** representing a Discipline Designator (e.g., A-, C-):

**ANNO-DIMS

Sheet-specific witness/extension lines, dimension terminators, and dimension text.

**ANNO-KEYN

Sheet-specific keynotes with associated leaders.

**ANNO-LEGN

Legends and schedules.

**ANNO-NOTE

Sheet-specific general notes and remarks.

**ANNO-PATT

Sheet-specific patterning and hatching (e.g., keyplan patterning).

**ANNO-REDL

Redlines, markups.

**ANNO-REVS

Revisions, amendments, addenda, and modifications.

**ANNO-SYMB

Sheet-specific symbols (e.g., north arrow, scales).

**ANNO-TEXT

Sheet-specific text and callouts with associated leaders.

**ANNO-REFR

An AutoCAD user-specific layer for use in attachment of external references (i.e., reference files).

Development of sheet files

As mentioned previously, referenced model files are used in the construction of sheet files. The user opens the sheet file type from Appendix B that is appropriate to his/her discipline then references existing model files.

As an example, in order to create a final Plumbing Plan sheet file (Figure 25), the engineer would first open/create a new sheet file.

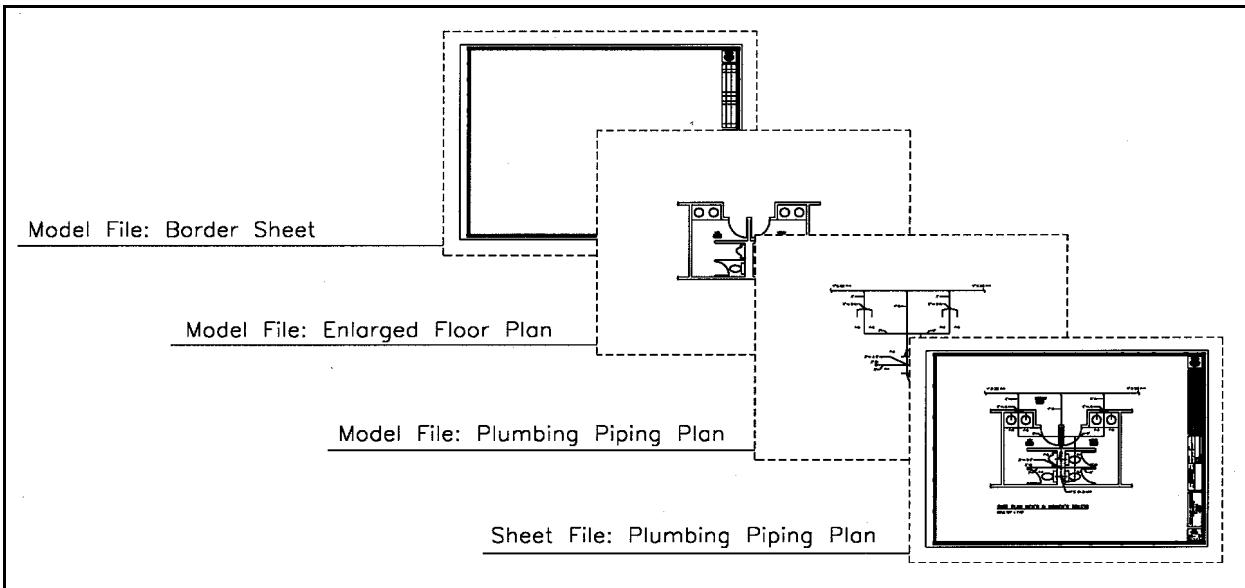


Figure 25. Using multiple referenced model files to build a sheet file without redundant effort

The engineer would reference various model files, such as the Architectural Floor Plan and the Plumbing Piping Plan. The engineer would have to "turn off" levels/layers within each referenced model file to achieve the desired sheet file. Then the Border Sheet model file would be referenced and scaled up to fit around the other referenced model files. Finally, the ten sheet file levels/layers such as P-ANNO-TEXT would be used to fill in sheet-specific information (e.g., sheet number, designer name). Once the final sheet file is achieved, the resulting file is saved (with all reference files attached).

5 Standard Symbology

Introduction

A “cell” in MicroStation and a “block” in AutoCAD are groups of graphical elements that can be manipulated as a single entity. Examples of typical cells/blocks are windows, doors, graphic scale keys, furniture, etc. The use of such symbology enhances CADD productivity and provides an excellent opportunity for CADD standardization.

Electronic Version of the Symbology/Elements

Deliverables

Within the electronic deliverables available as part of the A/E/C CADD Standard, the following symbology is provided (Figure 26):

- MicroStation cells contained in cell libraries (.cel) and custom line styles contained in resource files (.rsc).
- AutoCAD blocks, each in an individual drawing (.dwg) file, patterns in a pattern library file (.pat), multilines in a multiline library file (.mln), and custom line styles in a line type library file (.lin).

Line styles

Line style definitions determine the particular dash-dot sequence and relative length

of dashes, blank spaces, and the characteristics of any included text or shapes. Working with line styles provides a means of distinguishing the purpose of one line from another.

AutoCAD and MicroStation both provide a set of standard line styles, as well as allowing the user to define custom line styles. In AutoCAD these custom line styles are defined in a line type library file (.lin) and a multiline library file (.mln). In MicroStation, custom line styles are contained in resource files (.rsc) (see Chapter 3 “Line Types/Styles” for more information).

Note: *Custom line styles do not readily translate between systems; therefore users should anticipate that translated custom line styles may revert into their primitive graphics.*

Tabulated Version of the Symbology/Elements

Graphical presentations of the entire symbology library are shown in Appendix D “A/E/C CADD Symbology.”

The symbology library contains four types of elements: Lines, Patterns, Symbols, and Objects. Lines are defined as a graphical representation of linear drawing features (e.g., utility lines, fence lines, contours). Patterns are defined as repeated drawing elements (e.g., lines, dots, circles) within a defined area. Symbols are defined as MicroStation cells or AutoCAD blocks that are

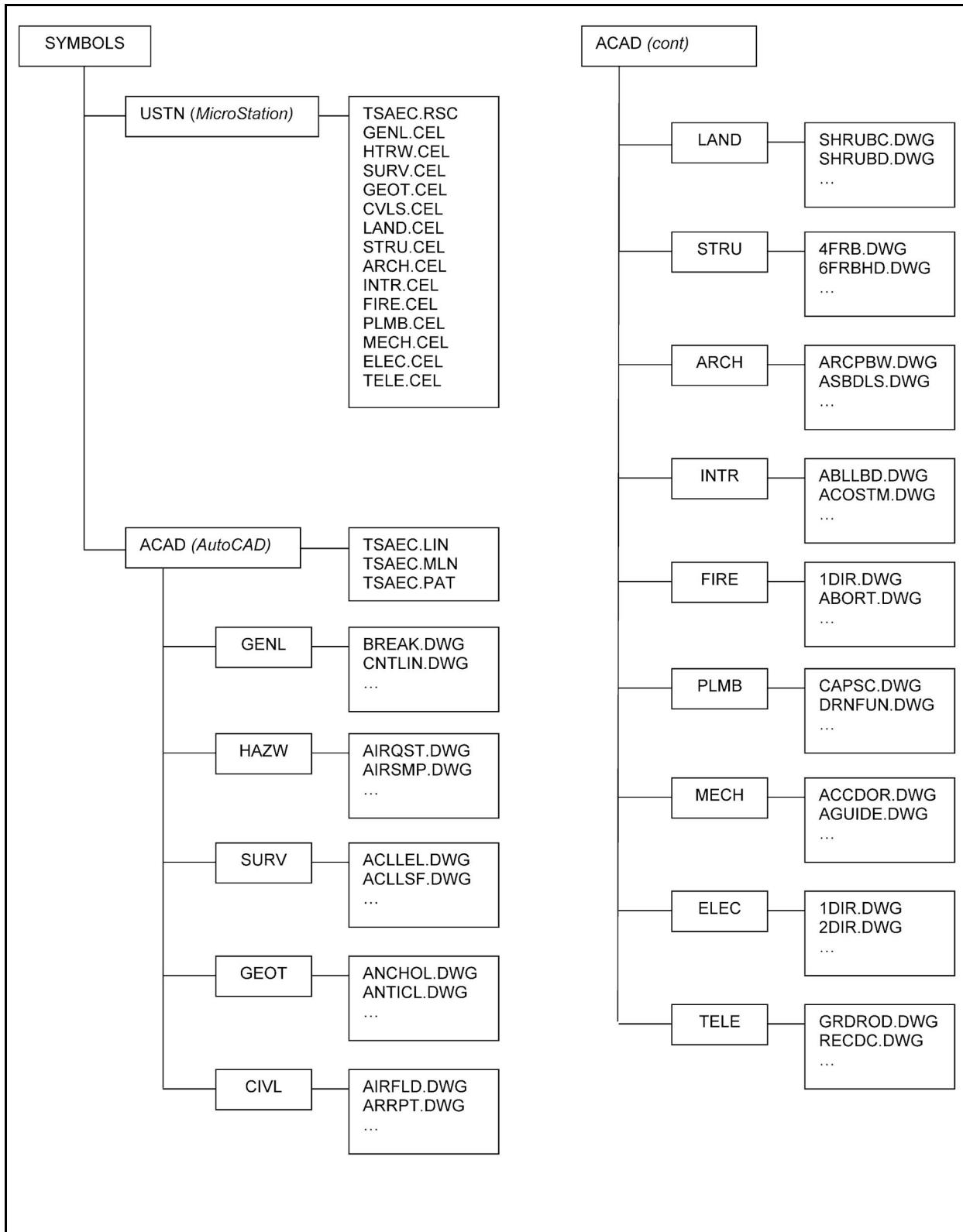


Figure 26. Symbology directory structure

representative of objects (e.g., electrical outlets, smoke detectors). Objects are defined as MicroStation cells or AutoCAD blocks that retain their actual size no matter the scale of the drawing (e.g., 30- by 50-in. desk, 3'-0" door).

Examples of the four element types are shown in Figures 27-30 and include the following information:

- **Name** - The name of the line type, pattern, symbol, or object. This is the name used when accessing the element with AutoCAD or MicroStation.
- **Description** - A brief explanation of what the symbol represents.
- **Element type** - The type of element that the symbology represents (i.e., line, pattern, symbol, or object).

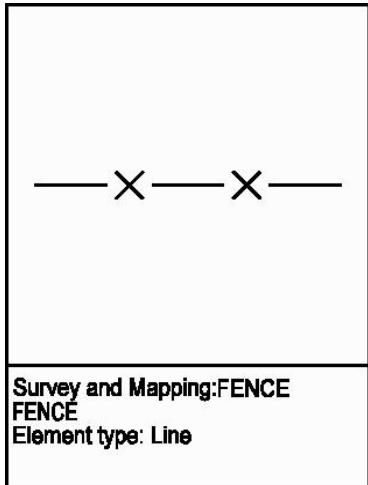


Figure 27. Line element

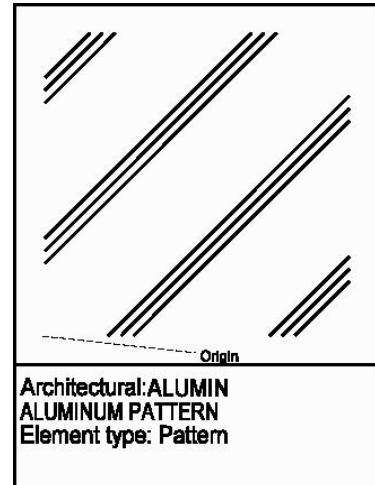


Figure 28. Pattern element

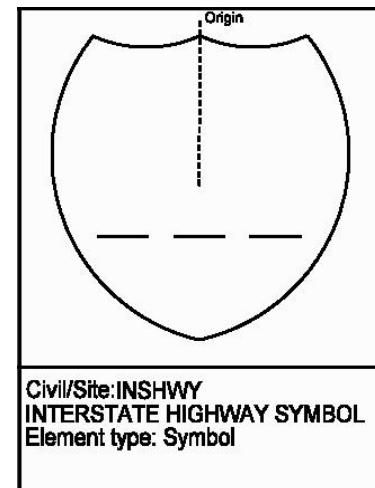


Figure 29. Symbol element

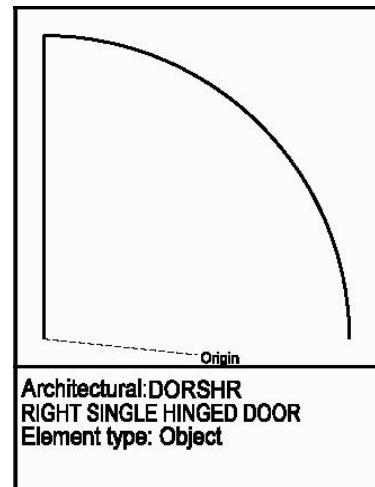


Figure 30. Object element

6 A/E/C CADD Standard Implementation Tools

CADD users throughout the DoD have indicated a need for customized shortcuts or utilities to facilitate efficient production of architectural and engineering CADD documents. Since the distribution of Release 1.4 of the A/E/C CADD Standard, users have been requesting tools to implement this detailed standard.

To meet this demand, the CADD/GIS Technology Center has developed applications for both AutoCAD and MicroStation that help in implementing the CADD Standard (i.e., the user will rarely have to refer to the standard document when developing CADD files).

The MicroStation-based tool (called Workspace) is distributed in three components: the Workspace generator, the Workspace itself, and a standard compliance checker. The generator creates the workspace tools (palettes, icons, etc.) using a Microsoft Access database that contains all the information within the model file tables in the CADD Standard. Using a “generator” gives system administrators the ability to edit the Access database and rerun the generator to create a Workspace that meets site-specific needs. The Workspace (Figure 31) allows the user to select the type of model or sheet file he/she wants to create (e.g., Architectural Floor Plan), and a palette of the various items that can be placed in that type of file is generated (e.g., doors, windows). The user then selects the specific type of item required (e.g., full height doors, partial height

doors, door symbols) and the workspace sets the proper level settings (e.g., level number, color, line weight, line style).

The final part of the workspace is the checker (Figure 32). The checker can evaluate individual model files to determine if they are in compliance with the A/E/C CADD Standard. The checker records which elements are not in compliance and can locate those elements for the user within the file.

The AutoCAD counterpart to the MicroStation A/E/C Workspace is also available. Using the same Access database as the MicroStation version, the AutoCAD A/E/C Workspace also assists the user in setting the correct drawing layer properties (Figure 33). The symbology in the A/E/C CADD Standard is also available for placement.

The Coast Guard is also adapting their CE-CADD software, which runs in AutoCAD, to follow the A/E/C CADD Standard. This product will be completed in the latter half of FY2001.

Further information on these implementation tools can be obtained from the CADD/GIS Technology Center web site at <http://tsc.wes.army.mil>.

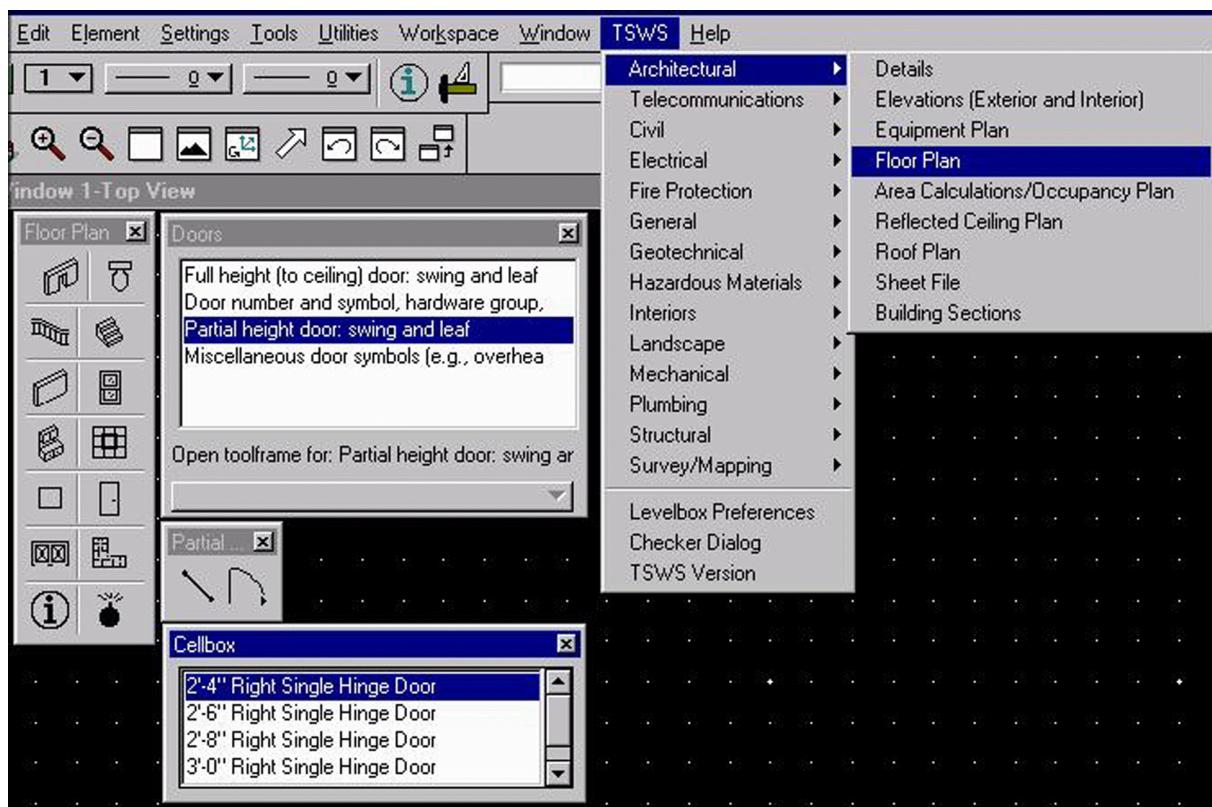


Figure 31. MicroStation workspace

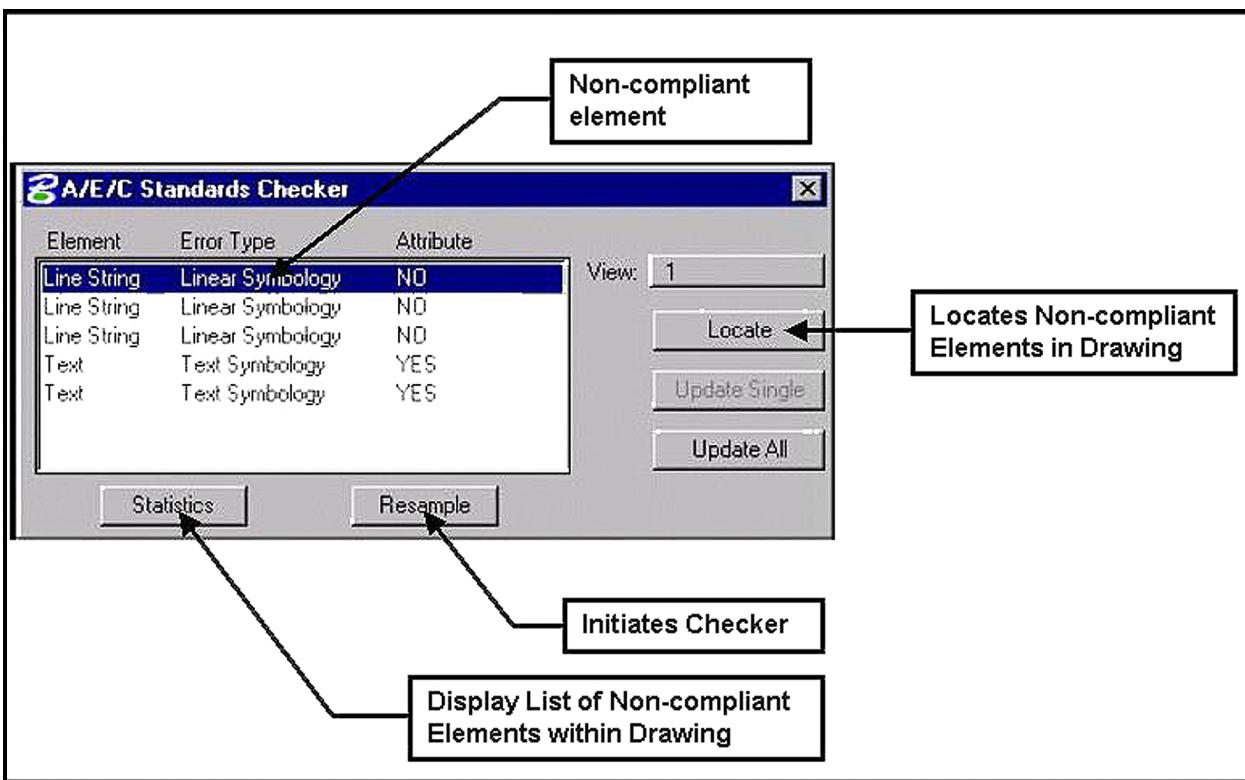


Figure 32. Workspace checker

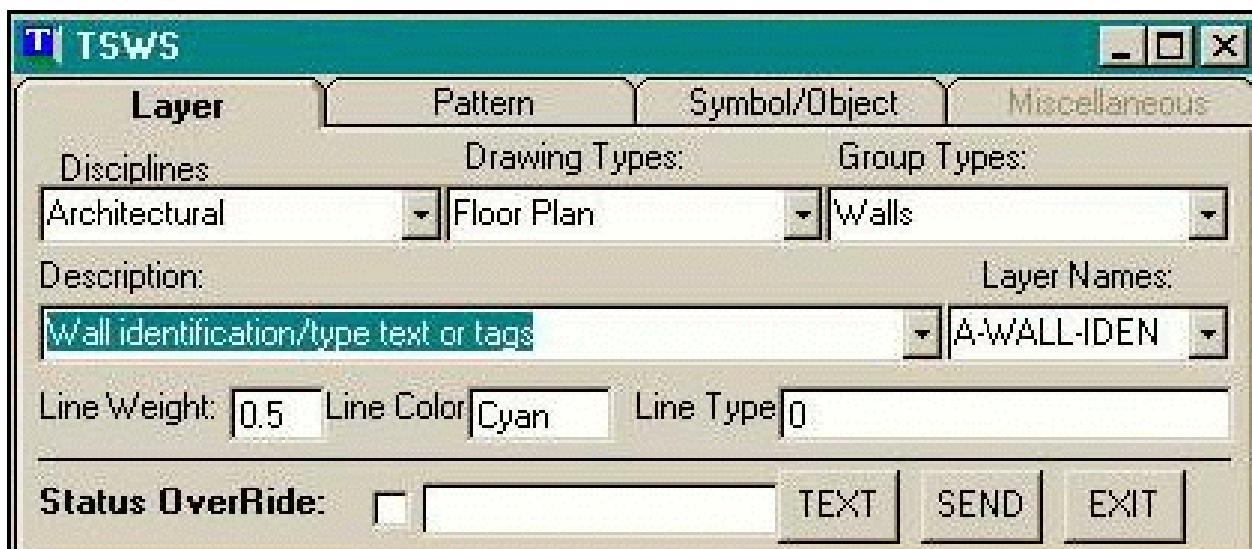


Figure 33. AutoCAD workspace

References

- American Institute of Architects. (1988). *Architectural graphic standards*. 8th ed., John Wiley and Sons, New York.
- American Institute of Architects. (2001). *AIA CAD layer guidelines: U.S. national CAD standard version 2*. American Institute of Architects Press, Washington, DC.
- American National Standard Institute. (1972). “Graphic symbols for electrical wiring and layout diagrams used in architect and building construction,” ANSI Y32.9-1972, Institute of Electrical and Electronics Engineers, New York.
- American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (1997). “1997 ASHRAE fundamentals handbook,” Atlanta, GA.
- American Society of Mechanical Engineers. (1995). “Decimal inch drawing sheet size and format,” ASME Y14.1-1995, New York.
- _____. (1995). “Metric drawing sheet size and format,” ASME Y14.1M-1995, New York.
- American Society of Plumbing Engineers. (1998). “Data book Volume 1: Fundamentals of plumbing engineering,” Chicago, IL.
- American Society for Testing and Materials. (1999). “Standard practice for the use of metric (SI) units in building design and construction (Committee E-6 Supplement to E380),” ASTM E621-94, Philadelphia, PA.
- Construction Metrication Council. (1998). *Construction metrication*. Vol 7, Issue 1, National Institute of Building Sciences, Washington, DC.
- Construction Specifications Institute. (2001). *Uniform drawing system*. Alexandria, VA.
- Department of Commerce/Department of Defense. (1997). *United States of America nautical chart symbols, abbreviations, and terms*. 10th ed., Department of Commerce, Washington, DC.
- Headquarters, U. S. Army Corps of Engineers. (1990). “Standards manual for U. S. Army Corps of Engineers Computer-Aided Design and Drafting (CADD) systems,” Engineer Manual 1110-1-1807, Washington, DC.

- International Organization for Standardization. (1982). "Technical drawings - General principles of presentation," ISO 128, Switzerland.
- _____. (1998). "Technical product documentation - Organization and naming of layers for CAD - Part 2: Concepts, format and codes used in construction documentation," ISO 13567-2, Switzerland.
- National Fire Protection Association. (1999). "Standard for fire safety symbols," NFPA 170, Quincy, MA.
- Sheet Metal and Air Conditioning Contractors' National Association. (1995). *HVAC duct construction standards-metal and flexible*. 2nd ed., Chantilly, VA.
- The CADD/GIS Technology Center. (1999). "A/E/C CADD standard: Main text and appendices A-E," U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- _____. (2001). "Spatial data standards/facility management standards," Release 2.0, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Appendix A

Model File Level/Layer Assignment Tables

This appendix provides the model file level/layer assignment tables:

General

Border Sheet.....	A3
Keyplan	A4

Hazardous Materials

Pollution Prevention Plan.....	A5
Sections.....	A6
Details	A7

Survey/Mapping

Survey and Mapping Plan	A8
Hydrographic Survey and Mapping Plan	A10
Property Boundary	A11
Existing Electrical Utilities Plan	A12
Existing Communication Systems Plan..	A13
Existing Domestic Water Plan	A14
Existing Sanitary Sewer Plan	A15
Existing Storm Sewer Plan.....	A16
Existing Industrial Waste Water Plan....	A17
Existing Natural Gas Utilities Plan	A18
Existing Liquid Fuel Utilities Plan.....	A19
Existing HTCW Utilities Plan.....	A20
Existing Airfield Lighting Plan	A21
Existing Profiles.....	A22
Existing X-Sections.....	A23

Geotechnical

Boring Location Plan	A24
Boring Log	A25

Civil

Site Plan	A26
Grading Plan	A28
Dredging Plan	A29
Transportation Site Plan.....	A30
Joint Layout Plan	A31
Airfield Plan.....	A32
Airfield Pavement Marking Plan.....	A33
Domestic Water Plan.....	A34
Sanitary Sewer Plan	A35
Storm Sewer Plan.....	A36
Industrial Waste Water Plan.....	A37
Natural Gas Utilities Plan.....	A38
Liquid Fuel Utilities Plan.....	A39
Profiles	A40
Elevations.....	A41
X-Sections.....	A42
Details	A43

Landscape

Landscape Plan	A44
Irrigation Plan	A45
Details	A46

Structural

Foundation Plan	A47
Framing Plan	A48
Column Plan	A49
Non-Building Structures	A50
Elevations.....	A51
Sections.....	A52
Details	A53

Architectural

Floor Plan.....	A54
Reflected Ceiling Plan.....	A56
Roof Plan	A57
Equipment Plan.....	A58
Area Calculations/Occupancy Plan	A59
Elevations.....	A60
Sections.....	A61
Details	A62

Interiors

Furniture Plan	A63
System Furniture Plan/Workstation Typicals	A64
Signage Placement Plan	A65
Elevations.....	A66
Details	A67

Fire Protection

Life Safety Plan.....	A68
Fire Suppression Plan.....	A69
Fire Alarm/Detection Plan	A70
Details	A71

Plumbing

Piping Plan.....	A72
Details	A73
Riser Diagrams.....	A74

Mechanical

HVAC Plan.....	A75
Specialty Piping and Equipment Plan	A77
HTCW Plan.....	A78
Material Handling.	A79
Machine Design	A80
Elevations.....	A81
Sections.....	A82
Details	A83
Control Diagrams	A84

Electrical

Lighting Plan.....	A85
Power Plan	A86
Special Systems Plan.....	A87
Grounding System Plan.....	A89
Electrical Utilities Plan.....	A90
Exterior Communication Systems Plan..	A92
Airfield Lighting Plan	A93
Details	A94
Riser/One-Line Diagrams.....	A95

Telecommunications

Telephone/Data Plan	A96
Riser Diagrams.....	A97

Discipline: General**Model File Type: Border Sheet**

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
6	G-ANNO-SYMB	G----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	G-ANNO-TEXT	G----TEP-	Miscellaneous text	0	V	V V
10	G-ANNO-TTLB	G----TPP-	Border and title block linework	0	V	V V

Note: V = Varies, NA = Not Applicable

Discipline: General**Model File Type: Key Plan**

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
3	G-ANNO-NPLT	G-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	G-ANNO-PATT	G-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
6	G-ANNO-SYMB	G-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	G-ANNO-TEXT	G-----TEP-	Miscellaneous text and callouts with associated leaders	0	V V V	
NA	G-ANNO-REFR	G-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA NA NA	
Grid Lines						
11	G-GRID-EXTR	G-GRIDEXM-	Column grid outside building	7	0.18	B/5 B/1
12	G-GRID-IDEN	G-GRIDIDM-	Column grid tags	0	0.25	R/1 R/3
Floor Information						
15	G-PLAN-OTLN	G-PLANOTM-	Floor outline/perimeter/building footprint	0	0.35	M/6 M/5
Site Information						
20	G-SITE-OTLN	G-SITEOTM-	Site plan - key map	0	0.35	M/6 M/5

Note: V = Varies, NA = Not Applicable

Discipline: Hazardous Materials

Model File Type: Pollution Prevention Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	H-ANNO-DIMS	H-----DIP	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	H-ANNO-KEYN	H-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	H-ANNO-NPLT	H-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	H-ANNO-PATT	H-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	H-ANNO-NOTE	H-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	H-ANNO-SYMB	H-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	H-ANNO-TEXT	H-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	H-ANNO-REFR	H-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Buildings						
11	H-BLDG-IDEN	H-BLDGIDM-	Annotation	0	0.35	Y/2 Y/4
12	H-BLDG-OTLN	H-BLDGOTM-	Command posts, information centers	0	0.35	Y/2 Y/4
Storage Facilities						
13	H-STOR-HAZM	H-STORHMM-	Hazardous materials	0	0.35	M/6 M/5
14	H-STOR-HAZW	H-STORHWM-	Hazardous waste	0	0.35	M/6 M/5
15	H-STOR-IDEN	H-STORIDM-	Annotation	0	0.35	M/6 M/5
Monitoring Stations						
17	H-MNST-GWTR	H-MNSTGWM-	Ground water	0	0.25	G/3 G/2
18	H-MNST-SWTR	H-MNSTSWM-	Surface water	0	0.25	G/3 G/2
19	H-MNST-AIRQ	H-MNSTAIM-	Air quality	0	0.25	G/3 G/2
20	H-MNST-SOIL	H-MNSTSOM-	Soil gas	0	0.25	G/3 G/2
21	H-MNST-LAND	H-MNSTLAM-	Landfill gas	0	0.25	G/3 G/2
22	H-MNST-IDEN	H-MNSTIDM-	Annotation	0	0.25	G/3 G/2
Pollution Areas						
23	H-POLL-ORIG	H-POLLORM-	Point of pollution origin	0	0.35	Y/2 Y/4
24	H-POLL-CONC	H-POLLCOM-	Polluted area of concern	0	0.35	Y/2 Y/4
25	H-POLL-POTN	H-POLLPOM-	Potential spill, emission, or release source	0	0.35	Y/2 Y/4
26	H-POLL-IDEN	H-POLLIDM-	Annotation	0	0.35	Y/2 Y/4
Decontamination						
29	H-DECN-EQPM	H-DECNEQM-	Decontamination equipment	0	0.25	R/1 R/3
30	H-DECN-IDEN	H-DECNIDM-	Annotation	0	0.35	M/6 M/5
Emergency Fixtures						
31	H-FIXT-EYEW	H-FIXTEYM-	Emergency eyewashes	0	0.25	G/3 G/2
32	H-FIXT-SHOW	H-FIXTSHM-	Emergency showers	0	0.25	G/3 G/2
Disposal Areas						
34	H-DISP-HAZW	H-DISPHWM-	Hazardous waste	0	0.18	B/5 B/1
35	H-DISP-MUNT	H-DISPMUM-	Munitions	0	0.18	B/5 B/1
36	H-DISP-TANK	H-DISPTAM-	Spill containment tanks	0	0.35	M/6 M/5
37	H-DISP-IDEN	H-DISPIDM-	Annotation	0	0.35	M/6 M/5
Sample Points						
39	H-SAMP-AIRS	H-SAMPAIM-	Air samples	0	0.25	R/1 R/3
40	H-SAMP-BIOL	H-SAMPBIM-	Biological samples	0	0.25	R/1 R/3
41	H-SAMP-GWTR	H-SAMPGWM-	Ground water samples	0	0.25	R/1 R/3
42	H-SAMP-SEDI	H-SAMPSEM-	Sediment samples	0	0.25	R/1 R/3
43	H-SAMP-SOIL	H-SAMPSOM-	Soil samples	0	0.25	R/1 R/3
44	H-SAMP-SOLI	H-SAMPSLM-	Solid material samples	0	0.25	R/1 R/3
45	H-SAMP-SWTR	H-SAMPSWM-	Surface water samples	0	0.25	R/1 R/3
46	H-SAMP-WAST	H-SAMPWAM-	Waste samples	0	0.25	R/1 R/3
47	H-SAMP-MAGN	H-SAMPMAM-	Magnetometer location points	0	0.25	R/1 R/3
48	H-SAMP-IDEN	H-SAMPIDM-	Annotation	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	H-STAT-DEMO-PHS1	H-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	H-STAT-DEMO-PHS2	H-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	H-STAT-DEMO-PHS3	H-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Hazardous Materials

Model File Type: Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	H-ANNO-DIMS	H-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	H-ANNO-KEYN	H-----KEP-	Reference keynotes with associated leaders	0	V	V
3	H-ANNO-NPLT	H-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	H-ANNO-PATT	H-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	H-ANNO-NOTE	H-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	H-ANNO-SYMB	H-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	H-ANNO-TEXT	H-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	H-ANNO-REFR	H-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Sections						
45	H-SECT-IDEN	H-SECTIDM-	Component identification numbers	0	0.35	Y/2 Y/4
46	H-SECT-MBND	H-SECTMBM-	Material beyond section cut	0	0.18	B/5 B/1
47	H-SECT-MCUT	H-SECTMCM-	Material cut by section	0	0.50	C/4 C/7
48	H-SECT-PATT	H-SECTPAM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
Demolition (used only in creating Existing/Demolition model files)						
56	H-STAT-DEMO-PHS1	H-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	H-STAT-DEMO-PHS2	H-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	H-STAT-DEMO-PHS3	H-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Hazardous Materials

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	H-ANNO-DIMS	H-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	H-ANNO-KEYN	H-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	H-ANNO-NPLT	H-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	H-ANNO-PATT	H-----PAP-	Miscellaneous patterning	0	0.18	Gr/8 Gr/9
6	H-ANNO-SYMB	H-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	H-ANNO-TEXT	H-----TEP-	Detail title text, text and associated leaders, notes	V	V	V V
Detail Information						
11	H-DETL-GRPH	H-DETLGRM-	Graphics, gridlines, non-text items	V	V	V V
12	H-DETL-METR	H-DETLMEM-	Metric-specific dimensions and notes	0	0.25	G/3 G/2
13	H-DETL-INPD	H-DETLINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	H-STAT-DEMO-PHS1	H-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	H-STAT-DEMO-PHS2	H-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	H-STAT-DEMO-PHS3	H-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Survey and Mapping Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Survey Lines						
8	V-SURV-DATA	V-SURVDAM-	Survey data (benchmarks and horizontal control points or monuments)	0	0.35	M/6 M/5
9	V-SURV-LINE	V-SURVLIM-	Survey, baseline, and control line	2	0.50	C/4 C/7
10	V-SURV-IDEN	V-SURVIDM-	Survey, baseline, and control line annotation	0	0.35	M/6 M/5
Buildings and Structures						
11	V-BLDG-OTLN	V-BLDGOTM-	Buildings and other structures	0	0.70	W/7 W/0
12	V-BLDG-IDEN	V-BLDGIDM-	Building and other structure annotation	0	0.35	Y/2 Y/4
Site						
13	V-SITE-FENC	V-SITEFEM-	Fences and handrails	0, FENCE	0.35	M/6 M/5
14	V-SITE-FENC-IDEN	V-SITEFIM-	Fence, handrail, ramp, and trail annotation	0	0.35	M/6 M/5
15	V-SITE-STRC	V-SITESRM-	Structures (bridges, sheds, foundation pads, footings, etc.)	0	0.35	22 22
16	V-SITE-IDEN	V-SITEIDM-	Existing site feature/structure annotation	0	0.35	M/6 M/5
17	V-SITE-OTLN	V-SITEOTM-	Existing site features (play structures, bike racks, benches, recreational equipment)	0	0.50	C/4 C/7
18	V-SITE-EROS	V-SITEERM-	Riprap, revetments/stone protection, breakwaters, dikes, jetties, and drains	0	0.25	R/1 R/3
19	V-SITE-EWAT	V-SITEEWM-	Water features	0	0.35	162 33
20	V-SITE-STRS	V-SITESTM-	Stairs and ramps	0	0.35	M/6 M/5
21	V-SITE-WALK	V-SITEWAM-	Walks, trails, and bicycle paths	0	0.35	Y/2 Y/4
22	V-SITE-VEGE	V-SITEVEM-	Existing treelines and vegetation	0, TREEL	0.35	82 18
Utilities (for more detailed surveys, use Survey and Mapping Utility model files)						
23	V-UTIL-SSWR	V-UTILSSM-	Sanitary lines and manholes	0, SSWAFX	0.50	C/4 C/7
24	V-UTIL-SSWR-IDEN	V-UTILSDM-	Sanitary annotation	0	0.35	Y/2 Y/4
25	V-UTIL-WATR	V-UTILWAM-	Water lines, hydrants, tanks	0, WATRX	0.50	C/4 C/7
26	V-UTIL-WATR-IDEN	V-UTILWIM-	Water annotation	0	0.35	Y/2 Y/4
27	V-UTIL-NGAS	V-UTILNGM-	Gas lines, features, and valves	0, NTGASX	0.50	C/4 C/7
28	V-UTIL-NGAS-IDEN	V-UTILNIM-	Gas annotation	0	0.35	Y/2 Y/4
29	V-UTIL-STEM	V-UTILSEM-	Steam lines and annotation	0	0.35	Y/2 Y/4
30	V-UTIL-STRM	V-UTILSTM-	Storm sewer lines, culverts, manholes, and headwalls	0, STRAFX, CULVRT	0.50	C/4 C/7
31	V-UTIL-STRM-IDEN	V-UTILSIM-	Storm sewer annotation	0	0.35	Y/2 Y/4
32	V-UTIL-ELEC	V-UTILELM-	Power lines, lights, telephone poles, communication lines	0, COMARX, COMUGX, EPARX, EPUGX, ESARX, ESUGX	0.50	C/4 C/7
33	V-UTIL-ELEC-IDEN	V-UTILEIM-	Power/communication annotation	0	0.35	Y/2 Y/4
Pavements/Transportation						
34	V-PVMT-ROAD	V-PVMTROM-	Roads, parking lots, railroads, airfield pavements	0, RAILS	0.35	Y/2 Y/4
35	V-PVMT-IDEN	V-PVMTIDM-	Road, parking lot, railroad, airfield pavement annotation	0	0.35	Y/2 Y/4
36	V-PVMT-PATT	V-PVMTPAM-	Joint patterns, text and dimensions	0	0.35	Y/2 Y/4
37	V-PVMT-MRKG	V-PVMTMRM-	Pavement markings and signs	0	0.35	Y/2 Y/4

Discipline: Survey/Mapping**Model File Type: Survey and Mapping Plan**

Topography							
38	V-TOPO-DTCH	V-TOPODTM-	Ditches and swales	0, DITCH	0.25	G/3	G/2
39	V-TOPO-BORE	V-TOPOBOM-	Boring locations	0	0.35	M/6	M/5
40	V-TOPO-COOR	V-TOPOCOM-	Coordinate grid ticks and text	0	0.35	122	23
41	V-TOPO-MAJR-IDEN	V-TOPOMAM-	Major contours - annotation	0	0.35	Y/2	Y/4
42	V-TOPO-MAJR	V-TOPOMJM-	Major contours	0	0.35	Y/2	Y/4
43	V-TOPO-MINR-IDEN	V-TOPOMIM-	Minor contours - annotation	0	0.25	G/3	G/2
44	V-TOPO-MINR	V-TOPOMNM-	Minor contours	0	0.25	G/3	G/2
48	V-TOPO-SPOT	V-TOPOSPM-	Spot elevations	0	0.35	Y/2	Y/4
49	V-TOPO-SLOP-TOPT	V-TOPOSTM-	Top/toe slopes	0	0.35	M/6	M/5
50	V-TOPO-BKLN	V-TOPOBKM-	Breaklines	4	0.70	W/7	W/0
51	V-TOPO-DTMT	V-TOPODTM-	DTM triangles	0	0.35	22	22
52	V-TOPO-DTMP	V-TOPODPM-	DTM points	0	0.35	M/6	M/5
Aerial Survey							
53	V-AERI-PATH	V-AERIPAM-	Aerial flight lines/paths	11	0.35	22	22
54	V-AERI-BNDY	V-AERIBNM-	Aerial photography boundaries	0	0.35	M/6	M/5
55	V-AERI-INDX	V-AERIINM-	Aerial photo index	0	0.70	W/7	W/0

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Hydrographic Survey and Mapping Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Survey Lines						
8	V-SURV-DATA	V-SURVDAM-	Survey data (benchmarks and horizontal control points or monuments)	0	0.35	M/6 M/5
9	V-SURV-LINE	V-SURVLIM-	Survey, baseline, and control lines	2	0.50	C/4 C/7
10	V-SURV-IDEN	V-SURVIDM-	Survey, baseline, and control line annotation	0	0.35	M/6 M/5
Structures						
11	V-STRC-OTLN	V-STRCOTM-	Bridges, piers, breakwaters, docks, floats, etc. - outlines	0	0.50	C/4 C/7
12	V-STRC-IDEN	V-STRCIDM-	Bridges, piers, breakwaters, docks, floats, etc. - annotation	0	0.35	Y/2 Y/4
Channels						
14	V-CHAN-LIMT	V-CHANLIM-	Channel limits, anchorages, turning basins, disposal areas, etc.	0	0.35	M/6 M/5
15	V-CHAN-IDEN	V-CHANIDM-	Channel limits, anchorages, turning basins, disposal areas, etc. - annotation	0	0.35	M/6 M/5
16	V-CHAN-DACL	V-CHANDAM-	De-authorized channel limits, anchorages, etc.	0	0.25	G/3 G/2
17	V-CHAN-DACL-IDEN	V-CHANDIM-	De-authorized channel limits, anchorages, etc. - annotation	0	0.25	G/3 G/2
18	V-CHAN-CNTR	V-CHANCNM-	Channel centerline and survey report lines	4	0.18	B/5 B/1
19	V-CHAN-CNTR-IDEN	V-CHANCIM-	Channel centerline and survey report lines - annotation	0	0.18	B/5 B/1
20	V-CHAN-AIDS	V-CHANAIM-	Navigation aids and text	0	0.35	Y/2 Y/4
Topography						
39	V-TOPO-BORE	V-TOPOBOM-	Boring locations	0	0.35	M/6 M/5
40	V-TOPO-COOR	V-TOPOCOM-	Coordinate grid ticks and text	0	0.35	122 23
41	V-TOPO-MAJR-IDEN	V-TOPOMAM-	Major contours - annotation	0	0.35	Y/2 Y/4
42	V-TOPO-MAJR	V-TOPOMJM-	Major contours	0	0.35	Y/2 Y/4
43	V-TOPO-MINR-IDEN	V-TOPOMIM-	Minor contours - annotation	0	0.25	G/3 G/2
44	V-TOPO-MINR	V-TOPOMNM-	Minor contours	0	0.25	G/3 G/2
45	V-TOPO-SHOR	V-TOPOSHM-	Shorelines, land features, and references	0	0.50	C/4 C/7
49	V-TOPO-SOUN	V-TOPOSOM-	Soundings	0	0.18	V V

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Property Boundary

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Survey Lines						
8	V-SURV-DATA	V-SURVDAM-	Survey data and benchmarks (PI, PT, etc information)	0	0.35	M/6 M/5
9	V-SURV-LINE	V-SURVLIM-	Survey and control line	2	0.50	C/4 C/7
10	V-SURV-IDEN	V-SURVIDM-	Survey and control line annotation	0	0.35	M/6 M/5
Buildings and Structures						
11	V-BLDG-OTLN	V-BLDGOTM-	Buildings and other structures	0	0.35	Y/2 Y/4
12	V-BLDG-IDEN	V-BLDGIDM-	Building and other structure annotation	0	0.50	C/4 C/7
Site						
13	V-SITE-FENC	V-SITEFEM-	Fences and handrails	0, FENCE	0.35	M/6 M/5
14	V-SITE-FENC-IDEN	V-SITEFIM-	Fence, handrail, ramp, sign, and trail annotation	0	0.35	M/6 M/5
15	V-SITE-STRC	V-SITESRM-	Structures (bridges, sheds, foundation pads, footings, etc.)	0	0.35	22 22
16	V-SITE-IDEN	V-SITEIDM-	Existing site feature/structure annotation	0	0.35	M/6 M/5
17	V-SITE-OTLN	V-SITEOTM-	Existing site features (play structures, bike racks, benches, recreational equipment)	0	0.50	C/4 C/7
18	V-SITE-EROS	V-SITEERM-	Riprap, revetments/stone protection, breakwaters, dikes, jetties, and drains	0	0.25	R/1 R/3
19	V-SITE-EWAT	V-SITEEWM-	Water features	0	0.35	162 33
20	V-SITE-STRS	V-SITESTM-	Stairs and ramps	0	0.35	M/6 M/5
21	V-SITE-WALK	V-SITEWAM-	Walks, trails, and bicycle paths	0	0.35	Y/2 Y/4
22	V-SITE-VEGE	V-SITEVEM-	Existing treelines and vegetation	0, TREEL	0.35	82 18
Property						
22	V-PROP-SECT	V-PROPSFM-	Section lines	7	0.35	M/6 M/5
23	V-PROP-QTRS	V-PROPQTM-	Quarter lines	11	0.35	M/6 M/5
24	V-PROP-BRNG	V-PROPBGM-	Bearings and distance labels	0	0.35	M/6 M/5
25	V-PROP-ESMT	V-PROPESM-	Government easements/property lines	0	0.50	C/4 C/7
26	V-PROP-LINE	V-PROPLIM-	Property lines (Existing recorded plats)	3	0.35	Y/2 Y/4
27	V-PROP-RWAY	V-PROPRWM-	Right of ways	RTOFWY	0.70	W/7 W/0
28	V-PROP-IDEN	V-PROPIDM-	Property annotation	0	0.35	M/6 M/5
29	V-PROP-SXTS	V-PROPSXM-	Sixteenth lines (40 lines)	16THLN	0.35	M/6 M/5
Utilities						
30	V-UTIL-LINE	V-UTILLIM-	Utilities	V	0.50	C/4 C/7
31	V-UTIL-IDEN	V-UTILIDM-	Utility annotation	0	0.35	Y/2 Y/4
Pavements/Transportation						
34	V-PVMT-ROAD	V-PVMTROM-	Roads, parking lots, railroads, airfield pavements	0, RAILS	0.35	Y/2 Y/4
35	V-PVMT-IDEN	V-PVMTIDM-	Road, parking lot, railroad, airfield pavement annotation	0	0.35	Y/2 Y/4
37	V-PVMT-MRKG	V-PVMTMRM-	Signs	0	0.35	Y/2 Y/4

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Electrical Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Primary Electrical Cables						
11	V-PRIM-OVHD	V-PRIMOVM-	Overhead electrical utility lines	EPARX	0.25	R/1 R/3
12	V-PRIM-OVHD-IDEN	V-PRIMOIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
13	V-PRIM-UNDR	V-PRIMUNM-	Underground electrical utility lines	EPUGX	0.25	R/1 R/3
14	V-PRIM-UNDR-IDEN	V-PRIMUIM-	Identifier tags, symbol modifier, and tex	0	0.25	R/1 R/3
Secondary Electrical Cables						
15	V-SECD-OVHD	V-SECDOVM-	Overhead electrical utility lines	ESARX	0.25	61 108
16	V-SECD-OVHD-IDEN	V-SECDOIM-	Identifier tags, symbol modifier, and text	0	0.25	61 108
17	V-SECD-UNDR	V-SECDUNM-	Underground electrical utility lines	ESUGX	0.25	61 108
18	V-SECD-UNDR-IDEN	V-SECDUIM-	Identifier tags, symbol modifier, and tex	0	0.25	61 108
Transformers						
19	V-TRAN-PADM	V-TRANPAM-	Pad mounted transformers	0	0.25	21 30
20	V-TRAN-PADM-IDEN	V-TRANPAM-	Identifier tags, symbol modifier, and text	0	0.25	21 30
21	V-TRAN-POLE	V-TRANPOM-	Pole mounted transformers	0	0.25	21 30
22	V-TRAN-POLE-IDEN	V-TRANPIM-	Identifier tags, symbol modifier, and tex	0	0.25	21 30
Electrical Support Equipment						
23	V-ELEC-JBOX	V-ELECJBM-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	0	0.25	21 30
24	V-ELEC-DEVC	V-ELECDEM-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	0	0.25	21 30
25	V-ELEC-SWCH	V-ELECSWM-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	0	0.25	21 30
26	V-ELEC-SUBS	V-ELECSUM-	Other substation equipment	0	0.25	21 30
Lights						
31	V-LITE-FIXT	V-LITEFXM-	Exterior Lights	0	0.25	121 15
32	V-LITE-FIXT-IDEN	V-LITEFIM-	Identifier tags, symbol modifier, and tex	0	0.25	121 15
Utility Poles						
33	V-POLE-UTIL	V-POLEUTM-	Utility poles	0	0.25	G/3 G/2
34	V-POLE-IDEN	V-POLEUIM-	Utility pole identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
35	V-POLE-GUYS	V-POLEGYM-	Guying equipment	0	0.25	G/3 G/2
36	V-POLE-GUYS-IDEN	V-POLEGIM-	Guying equipment identifier tags, symbol modifiers, and tex	0	0.25	G/3 G/2
Underground Ductbanks (to be used when multiple systems are in one ductbank system)						
37	V-DUCT-MULT	V-DUCTMUM-	Ductbank	EUDUCX	0.25	201 29
38	V-DUCT-MULT-IDEN	V-DUCTMIM-	Identifier tags, symbol modifier and tex	0	0.25	201 29
Cathodic Protection System						
40	V-CATH-ANOD	V-CATHANM-	Sacrificial anode system	0	0.25	161 25
41	V-CATH-CURR	V-CATHCUM-	Impress current system	0	0.25	161 25
42	V-CATH-TEST	V-CATHTEM-	Test stations	0	0.25	161 25
43	V-CATH-IDEN	V-CATHIDM-	Identifier tags, symbol modifier, and tex	0	0.25	161 25
Special Systems						
45	V-SPCL-TRAF	V-SPCLTRM-	Traffic signal system	0	0.25	151 72
46	V-SPCL-TRAF-IDEN	V-SPCLTIM-	Traffic signal identifier tags, symbol modifier, and text	0	0.25	151 72
47	V-SPCL-SYST	V-SPCLSPM-	Special systems (UMCS, EMCS, CATV, etc.)	0	0.25	151 72
48	V-SPCL-IDEN	V-SPCLIDM-	Special systems (UMCS, EMCS, CATV, etc.) identifier tags, symbol modifier, and text	0	0.25	151 72

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Communication Systems Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Communications Cables (Copper and Fiber Optic)						
11	V-COMM-OVHD	V-COMMOVM-	Overhead communications/telephone lines	COMARX	0.25	81 26
12	V-COMM-OVHD-IDEN	V-COMMOIM-	Identifier tags, symbol modifier and text	0	0.25	81 26
13	V-COMM-UNDR	V-COMMUNM-	Underground communications/telephone lines	COMUGX	0.25	81 26
14	V-COMM-UNDR-IDEN	V-COMMUIM-	Identifier tags, symbol modifier and tex	0	0.25	81 26
Communications Support Equipment						
23	V-COMM-JBOX	V-COMMJBIM-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	0	0.25	21 30
26	V-COMM-EQPM	V-COMMEQM-	Other communications distribution equipmen	0	0.25	21 30
Utility Poles (Use only if different from Existing Electrical Utilities Plan poles)						
33	V-POLE-UTIL	V-POLEUTM-	Poles	0	0.25	G/3 G/2
34	V-POLE-IDEN	V-POLEIDM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
35	V-POLE-GUYS	V-POLEGYM-	Guying equipment	0	0.25	G/3 G/2
36	V-POLE-GUYS-IDEN	V-POLEGIM-	Guying equipment identifier tags, symbol modifiers, and tex	0	0.25	G/3 G/2
Underground Ductbanks (to be used when multiple systems are in one ductbank system)						
37	V-DUCT-MULT	V-DUCTMUM-	Ductbank	EUDUCX	0.25	201 29
38	V-DUCT-MULT-IDEN	V-DUCTMIM-	Identifier tags, symbol modifier and tex	0	0.25	201 29

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Domestic Water Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-DOMW-DEVC	V-DOMWDEM-	Connectors, faucets, reducers, regulators, vents, intake points, tanks, taps, backflow preventers, and valves	0	0.35	M/6 M/5
12	V-DOMW-HYDR	V-DOMWHYM-	Hydrants	0	0.25	R/1 R/3
13	V-DOMW-METR	V-DOMWMEM-	Meters	0	0.25	G/3 G/2
14	V-DOMW-NHYD	V-DOMWNHM-	Non-potable hydrants/flushing hydrants	0	0.25	R/1 R/3
Stations						
16	V-DOMW-PUMP	V-DOMWPUM-	Booster pump stations	0	0.35	M/6 M/5
17	V-DOMW-REDC	V-DOMWREM-	Pressure reducing stations	0	0.35	M/6 M/5
18	V-DOMW-STNS-IDEN	V-DOMWSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	V-DOMW-RSRV-IDEN	V-DOMWRIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
20	V-DOMW-RSRV	V-DOMWRSRSM-	Reservoirs	0	0.25	R/1 R/3
21	V-DOMW-TANK	V-DOMWTAM-	Water storage tanks	0	0.25	R/1 R/3
22	V-DOMW-WELL	V-DOMWWEM-	Water well houses	0	0.25	R/1 R/3
Pits						
26	V-DOMW-PITS-IDEN	V-DOMWPIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	V-DOMW-VENT	V-DOMWVEM-	Vent pits	0	0.25	G/3 G/2
28	V-DOMW-VLVE	V-DOMWVLIM-	Valve pits/vaults	0	0.25	G/3 G/2
Piping						
32	V-DOMW-ABND	V-DOMWABM-	Abandoned piping	2	0.35	M/6 M/5
37	V-DOMW-FTTG	V-DOMWFTM-	Caps, cleanouts, crosses, and tees	0	0.35	M/6 M/5
40	V-DOMW-IDEN	V-DOMWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	V-DOMW-MAIN	V-DOMWMAM-	Main domestic water piping	WATRX	0.35	M/6 M/5
44	V-DOMW-NPOT	V-DOMWNPM-	Non-potable water piping	NONPOT	0.35	M/6 M/5
45	V-DOMW-FIRE	V-DOMWFIM-	Fire lines	FIRE	0.25	R/1 R/3
46	V-DOMW-SERV	V-DOMWSEM-	Domestic water service piping	0	0.35	M/6 M/5
47	V-DOMW-SIGN	V-DOMWSIM-	Surface markers/signs	0	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Sanitary Sewer Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-SSWR-DEVC	V-SSWRDEM-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves	0	0.35	M/6 M/5
12	V-SSWR-DEV-C-IDEN	V-SSWRDIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
Stations						
15	V-SSWR-PLNT	V-SSWRPLM-	Treatment plants	0	0.35	M/6 M/5
16	V-SSWR-PUMP	V-SSWRPUM-	Booster pump stations	0	0.35	M/6 M/5
18	V-SSWR-STNS-IDEN	V-SSWRSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	V-SSWR-RSVR-IDEN	V-SSWRRIM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
20	V-SSWR-LAGN	V-SSWRLAGM-	Lagoons	0	0.25	G/3 G/2
21	V-SSWR-TANK	V-SSWRTAM-	Septic tanks	0	0.25	G/3 G/2
Junction Boxes						
22	V-SSWR-JBOX	V-SSWRJBM-	Junction boxes and manholes	0	0.25	R/1 R/3
23	V-SSWR-JBOX-IDEN	V-SSWRJIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
Filtration/Drainage Areas						
26	V-SSWR-FILT	V-SSWRFIM-	Filtration beds	0	0.25	G/3 G/2
27	V-SSWR-FILT-IDEN	V-SSWRFDM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
28	V-SSWR-NITF	V-SSWRNIM-	Nitrification drain fields	0	0.25	G/3 G/2
29	V-SSWR-LEAC	V-SSWRLEM-	Leach field	0	0.25	G/3 G/2
Piping						
32	V-SSWR-ABND	V-SSWRABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-SSWR-FLOW	V-SSWRFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	V-SSWR-FTTG	V-SSWRFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	V-SSWR-IDEN	V-SSWRIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	V-SSWR-MAIN	V-SSWRMAM-	Sanitary sewer piping	SSWAFX	0.35	M/6 M/5
46	V-SSWR-SERV	V-SSWRSEM-	Sanitary sewer service piping	0	0.25	R/1 R/3
47	V-SSWR-SIGN	V-SSWRSIM-	Surface markers/signs	0	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Storm Sewer Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-STRM-DEVC	V-STRMDEM-	Downspouts, flumes, oil/water separators, and flap gates	0	0.35	M/6 M/5
Stations						
16	V-STRM-PUMP	V-STRMPUM-	Pump stations	0	0.35	M/6 M/5
17	V-STRM-FMON	V-STRMFMM-	Flow monitoring station	0	0.35	M/6 M/5
18	V-STRM-STNS-IDEN	V-STRMSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs/Watersheds						
19	V-STRM-RSVR-IDEN	V-STRMRIM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
20	V-STRM-LAGN	V-STRMLAM-	Lagoons, ponds, watersheds, and basins	0	0.25	G/3 G/2
21	V-STRM-AFFF	V-STRMAFM-	AFFF lagoon/detention pond	0	0.25	G/3 G/2
Drainage Structures						
22	V-STRM-MHOL	V-STRMMHM-	Manholes	0	0.25	R/1 R/3
26	V-STRM-DRAN-IDEN	V-STRMDRM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
27	V-STRM-EROS	V-STRMERM-	Erosion control (riprap)	0	0.18	B/5 B/1
28	V-STRM-CHUT	V-STRMCHM-	Chutes and concrete erosion control structures	0	0.25	R/1 R/3
29	V-STRM-HDWL	V-STRMHDM-	Headwalls and endwalls	0	0.70	W/7 W/0
30	V-STRM-INLT	V-STRMINM-	Inlets (curb, surface, and catch basins)	0	0.25	G/3 G/2
Piping						
32	V-STRM-ABND	V-STRMABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-STRM-FLOW	V-STRMFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	V-STRM-FTTG	V-STRMFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	V-STRM-IDEN	V-STRMIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
42	V-STRM-CULV	V-STRMCLM-	Culverts	0	0.25	G/3 G/2
43	V-STRM-MAIN	V-STRMMAM-	Storm sewer piping	STRAFX	0.35	M/6 M/5
44	V-STRM-SUBS	V-STRMSUM-	Subsurface drain piping	0	0.25	G/3 G/2
45	V-STRM-ROOF	V-STRMROM-	Roof drain line	0	0.25	G/3 G/2
46	V-STRM-SERV	V-STRMSEM-	Storm sewer service piping	0	0.25	R/1 R/3
47	V-STRM-SIGN	V-STRMSIM-	Surface markers/signs	0	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Industrial Waste Water Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-INDW-DEVC	V-INDWDEM-	Grit chambers, meters, flumes, neutralizers, oil/water separators, ejectors, tanks, and valves	0	0.35	M/6 M/5
Stations						
15	V-INDW-PLNT	V-INDWPLM-	Treatment plants	0	0.35	M/6 M/5
16	V-INDW-LIFT	V-INDWLIM-	Lift stations	0	0.35	M/6 M/5
18	V-INDW-STNS-IDEN	V-INDWSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	V-INDW-RSRV-IDEN	V-INDWRIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
20	V-INDW-LAGN	V-INDWLAM-	Lagoons	0	0.35	M/6 M/5
Junction Boxes						
22	V-INDW-JBOX	V-INDWJBM-	Junction boxes and manholes	0	0.25	R/1 R/3
Piping						
32	V-INDW-ABND	V-INDWABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-INDW-FLOW	V-INDWFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	V-INDW-FTTG	V-INDWFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	V-INDW-IDEN	V-INDWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	V-INDW-MAIN	V-INDWMAM-	Main industrial waste water piping	IWASTE	0.35	M/6 M/5
46	V-INDW-SERV	V-INDWSEM-	Industrial waste water service piping	0	0.25	R/1 R/3
47	V-INDW-SIGN	V-INDWSIM-	Surface markers/signs	0	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Natural Gas Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-NGAS-DEVC	V-NGASDEM-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves	0	0.35	M/6 M/5
12	V-NGAS-DEV-C-IDEN	V-NGASDIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
13	V-NGAS-METR	V-NGASMEM-	Meters	0	0.25	G/3 G/2
Stations						
16	V-NGAS-PUMP	V-NGASPUM-	Compressor stations	0	0.35	M/6 M/5
17	V-NGAS-REDC	V-NGASREM-	Reducing stations	0	0.35	M/6 M/5
18	V-NGAS-STNS-IDEN	V-NGASSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Pits						
26	V-NGAS-PITS-IDEN	V-NGASPIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	V-NGAS-VENT	V-NGASVEM-	Vent pits	0	0.25	G/3 G/2
28	V-NGAS-VLVE	V-NGASVLM-	Valve pits/boxes	0	0.25	G/3 G/2
Piping						
32	V-NGAS-ABND	V-NGASABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-NGAS-FLOW	V-NGASFLM-	Flow direction arrows	0	0.25	M/6 M/5
37	V-NGAS-FTTG	V-NGASFTM-	Caps, crosses, and tees	0	0.35	M/6 M/5
40	V-NGAS-IDEN	V-NGASIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	V-NGAS-MAIN	V-NGASMAM-	Main natural gas piping	NTGASX	0.35	M/6 M/5
46	V-NGAS-SERV	V-NGASSEM-	Service piping	0	0.25	R/1 R/3
47	V-NGAS-SIGN	V-NGASSIM-	Surface markers/signs	0	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Liquid Fuel Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-FUEL-DEVC	V-FUELDEM-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves	0	0.35	M/6 M/5
13	V-FUEL-METR	V-FUELMEM-	Meters	0	0.25	G/3 G/2
Stations						
16	V-FUEL-PUMP	V-FUELPU-	Booster pump stations	0	0.35	M/6 M/5
18	V-FUEL-STNS-IDEN	V-FUELSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
21	V-FUEL-TANK	V-FUELTAM-	Fuel tanks	0	0.25	G/3 G/2
Junction Boxes						
22	V-FUEL-JBOX	V-FUELJBM-	Junction boxes, manholes, handholes, test boxes	0	0.25	R/1 R/3
Pits						
25	V-FUEL-HYDR	V-FUELHYM-	Hydrant control pits	0	0.25	G/3 G/2
26	V-FUEL-PITS-IDEN	V-FUELPI-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	V-FUEL-VENT	V-FUELVEM-	Vent pits	0	0.25	G/3 G/2
28	V-FUEL-VLVE	V-FUELVLM-	Valve pits	0	0.25	G/3 G/2
29	V-FUEL-TRCH	V-FUELTRM-	Fuel line trench	0	0.25	G/3 G/2
Piping						
32	V-FUEL-ABND	V-FUELABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-FUEL-FLOW	V-FUELFLM-	Flow direction arrows	0	0.35	M/6 M/5
36	V-FUEL-DEFL	V-FUELDEM-	Defueling piping	0	0.35	M/6 M/5
37	V-FUEL-FTTG	V-FUELFTM-	Caps, crosses, and tees	0	0.35	M/6 M/5
40	V-FUEL-IDEN	V-FUELIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	V-FUEL-MAIN	V-FUELMM-	Main fuel piping	LIQPET	0.35	M/6 M/5
46	V-FUEL-SERV	V-FUELSEM-	Service piping	0	0.35	M/6 M/5

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing HTCW Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	V-ALGN-DATA	V-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	V-ALGN-LINE	V-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	V-ALGN-STAT	V-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	V-HTCW-DEVC	V-HTCWDEM-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	0	0.35	M/6 M/5
Stations						
16	V-HTCW-PUMP	V-HTCWPUM-	Pump stations	0	0.35	M/6 M/5
18	V-HTCW-STNS-IDEN	V-HTCWSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Plants						
19	V-HTCW-CHLP	V-HTCWCPCM-	Chilled water plant	0	0.35	M/6 M/5
20	V-HTCW-HTPP	V-HTCWHPM-	High temperature water plant	0	0.35	M/6 M/5
21	V-HTCW-PLNT-IDEN	V-HTCWPIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Junction Boxes						
22	V-HTCW-JBOX	V-HTCWJBM-	Junction boxes, manholes, handholes, test boxes	0	0.25	R/1 R/3
Pits						
25	V-HTCW-PITS	V-HTCWPTM-	Valve pits/vaults, steam pits	0	0.25	G/3 G/2
Piping						
32	V-HTCW-ABND	V-HTCWABM-	Abandoned piping	2	0.35	M/6 M/5
33	V-HTCW-FLOW	V-HTCWFLM-	Flow direction arrows	0	0.25	G/3 G/2
34	V-HTCW-CHLL	V-HTCWCHM-	Main chilled water piping	0	0.35	M/6 M/5
35	V-HTCW-CHLS	V-HTCWCSM-	Chilled water service piping	0	0.25	G/3 G/2
37	V-HTCW-FTTG	V-HTCWFTM-	Caps and flanges	0	0.35	M/6 M/5
38	V-HTCW-HTPL	V-HTCWHTM-	Main high temperature piping	0	0.25	R/1 R/3
39	V-HTCW-HTPS	V-HTCWHSM-	High temperature service piping	0	0.25	G/3 G/2
40	V-HTCW-IDEN	V-HTCWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
41	V-HTCW-LTPL	V-HTCWLTM-	Main low temperature piping	0	0.35	Y/2 Y/4
42	V-HTCW-LTPS	V-HTCWLSM-	Low temperature service piping	0	0.25	G/3 G/2
45	V-HTCW-RTRN	V-HTCWRTM-	Return for all HTCW lines	0	0.18	B/5 B/1
48	V-HTCW-STML	V-HTCWSTM-	Main steam piping	0	0.25	R/1 R/3
49	V-HTCW-STMS	V-HTCWSSM-	Steam service piping	0	0.25	G/3 G/2
Geothermal Heat Pump System						
50	V-GTHP-EQPM	V-GTHPEQM-	Equipment	0	0.35	M/6 M/5
51	V-GTHP-PIPE	V-GTHPPIM-	Piping (includes fittings, valves)	0	0.35	M/6 M/5

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Airfield Lighting Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Airfield Lighting Circuits						
11	V-CIRC-SERS	V-CIRCSEM-	Series circuits	0	0.35	82 18
12	V-CIRC-MULT	V-CIRCMUM-	Multiple circuits	0	0.35	22 22
13	V-CIRC-CTRL	V-CIRCCTM-	Control and monitoring circuits	0	0.35	12 27
15	V-CIRC-IDEN	V-CIRCIDM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Devices						
20	V-AIRF-DEVC	V-AIRFDEM-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	0	0.35	M/6 M/5
Junction Boxes						
23	V-AIRF-JBOX	V-AIRFJBM-	Junction boxes, pull boxes, manholes, handholes, pedestals, splice:	0	0.25	R/1 R/3
Lights						
25	V-LITE-OBST	V-LITEOBM-	Obstruction lights	0	0.35	Y/2 Y/4
26	V-LITE-DIST	V-LITEDIM-	Distance and arresting gear markers	0	0.35	M/6 M/5
28	V-LITE-APPR	V-LITEAPM-	Approach lights	0	0.35	M/6 M/5
29	V-LITE-THRS	V-LITETHM-	Threshold lights	0	0.35	M/6 M/5
30	V-LITE-RUNW	V-LITERUM-	Runway lights	0	0.35	M/6 M/5
31	V-LITE-TAXI	V-LITETAM-	Taxiway lights	0	0.35	M/6 M/5
32	V-LITE-LANE	V-LITELAM-	Hoverlane, taxilane, and helipad lights	0	0.35	M/6 M/5
33	V-LITE-SIGN	V-LITESIM-	Taxiway guidance signs	0	0.35	M/6 M/5
Ductbank						
37	V-AIRF-DUCT	V-AIRFDUM-	Ductbanks	0	0.25	G/3 G/2
Beacons						
42	V-BCNS-IDEN	V-BCNSIDM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
43	V-BCNS-STRB	V-BCNSSTM-	Strobe beacons	0	0.35	M/6 M/5
44	V-BCNS-MISC	V-BCNSMIM-	Miscellaneous navaids - windcones and beacons	0	0.35	M/6 M/5

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing Profiles

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Crossing Elements - Use symbology from previous model files						
Grade Linework						
41	V-GRAD-FNSH	V-GRADFNFM-	Finished grade	0	0.50	C/4 C/7
44	V-GRAD-EXST	V-GRADEXM-	Existing grade, ground line	3	0.35	M/6 M/5
Grid Lines						
48	V-GRID-MAJR	V-GRIDMAM-	Major grid lines	0	0.25	R/1 R/3
49	V-GRID-MINR	V-GRIDMIM-	Minor grid lines	1	0.18	Gr/8 Gr/9
50	V-GRID-FRAM	V-GRIDFRM-	Frame	0	0.50	C/4 C/7
51	V-GRID-TEXT	V-GRIDTEM-	Border text, annotation	0	0.35	Y/2 Y/4

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Model File Type: Existing X-Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	V-ANNO-DIMS	V----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	V-ANNO-KEYN	V----KEP-	Reference keynotes with associated leaders	0	V	V
3	V-ANNO-NPLT	V----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	V-ANNO-PATT	V----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	V-ANNO-NOTE	V----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	V-ANNO-SYMB	V----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	V-ANNO-TEXT	V----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	V-ANNO-REFR	V----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Crossing Elements - Use symbology from previous model files						
Sections						
35	V-SECT-IDEN	V-SECTIDM-	Component identification numbers	0	0.35	Y/2 Y/4
36	V-SECT-MBND	V-SECTMBM-	Material beyond section cut	0	0.18	B/5 B/1
37	V-SECT-MCUT	V-SECTMCM-	Material cut by section	0	0.50	C/4 C/7
38	V-SECT-PATT	V-SECTPAM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
Grade Linework						
41	V-GRAD-FNSH	V-GRADFNM-	Finished grade	0	0.50	C/4 C/7
44	V-GRAD-EXST	V-GRADEXM-	Existing grade, ground line	3	0.35	M/6 M/5
Grid Lines						
48	V-GRID-MAJR	V-GRIDMAM-	Major grid lines	0	0.25	R/1 R/3
49	V-GRID-MINR	V-GRIDMIM-	Minor grid lines	1	0.18	Gr/8 Gr/9
50	V-GRID-FRAM	V-GRIDFRM-	Frame	0	0.50	C/4 C/7
51	V-GRID-TEXT	V-GRIDTEM-	Border text, annotation	0	0.35	Y/2 Y/4

Note: V = Varies, NA = Not Applicable

Discipline: Geotechnical

Model File Type: Boring Location Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	B-ANNO-DIMS	B----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	B-ANNO-KEYN	B----KEP-	Reference keynotes with associated leaders	0	V	V
3	B-ANNO-NPLT	B----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	B-ANNO-PATT	B----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	B-ANNO-NOTE	B----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	B-ANNO-SYMB	B----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	B-ANNO-TEXT	B----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	B-ANNO-REFR	B----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Borings/Perc Holes						
12	B-BORE-HOLE	B-BOREHOM-	Bore/perc hole locations	0	0.35	Y/2 Y/4
13	B-BORE-IDEN	B-BOREIDM-	Bore/perc hole numbers	0	0.35	Y/2 Y/4

Note: V = Varies, NA = Not Applicable

Discipline: Geotechnical

Model File Type: Boring Log

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	B-ANNO-DIMS	B----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	B-ANNO-KEYN	B----KEP-	Reference keynotes with associated leaders	0	V	V
3	B-ANNO-NPLT	B----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	B-ANNO-PATT	B----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	B-ANNO-NOTE	B----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	B-ANNO-SYMB	B----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	B-ANNO-TEXT	B----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	B-ANNO-REFR	B----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Borings/Perc Holes						
10	B-BORE-ELEV	B-BOREELM-	Boring elevations	0	0.25	G/3 G/2
11	B-BORE-FDTA	B-BOREFDM-	Field data	0	0.25	G/3 G/2
12	B-BORE-HOLE	B-BOREHOM-	Bore/perc hole number	0	0.35	Y/2 Y/4
13	B-BORE-IDEN	B-BOREIDM-	Component identification numbers	0	0.35	Y/2 Y/4
14	B-BORE-LDTA	B-BORELDM-	Laboratory data	0	0.25	R/1 R/3
15	B-BORE-PATT	B-BOREPAM-	Soil/rock patterns	0	0.18	Gr/8 Gr/9

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Site Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Buildings and Structures						
11	C-BLDG-OTLN	C-BLDGOTM-	Buildings and other structures	0	0.70	W/7 W/0
12	C-BLDG-IDEN	C-BLDGIDM-	Building and other structure annotation	0	0.35	Y/2 Y/4
Site Improvement						
13	C-SITE-FENC	C-SITEFEM-	Fences and handrails	0, FENCE	0.35	M/6 M/5
14	C-SITE-FENC-IDEN	C-SITEFIM-	Fence, handrail, ramp, sign, and trail annotation	0	0.35	M/6 M/5
15	C-SITE-STRC	C-SITESRM-	Structures (bridges, sheds, foundation pads, footings, etc.)	0	0.35	22 22
16	C-SITE-IDEN	C-SITEIDM-	Site improvement annotation	0	0.35	M/6 M/5
17	C-SITE-IMPR	C-SITEIMM-	Site improvements (channel or levee features)	0	0.50	C/4 C/7
18	C-SITE-EROS	C-SITEERM-	Riprap, revetments/stone protection, breakwaters, dikes, jetties, and drains	0	0.25	R/1 R/3
19	C-SITE-EROS-IDEN	C-SITEEIM-	Riprap, revetment/stone protection, breakwater, dike, jetty, and drain annotation	0	0.35	12 27
20	C-SITE-STRS	C-SITESTM-	Stairs and ramps	0	0.35	M/6 M/5
21	C-SITE-WALK	C-SITEWAM-	Walks, trails and bicycle paths	V	0.35	Y/2 Y/4
Property						
25	C-PROP-ESMT	C-PROPSM-	Easements	3	0.70	84 34
26	C-PROP-CONS	C-PROPCOM-	Construction limits/controls, staging area	11	0.70	W/7 W/0
27	C-PROP-RWAY	C-PROPRWM-	Right of ways	RTOFWY	0.70	W/7 W/0
28	C-PROP-IDEN	C-PROPIDM-	Property annotation	0	0.35	M/6 M/5
Storm Drainage (for more detailed storm drainage, use the Civil - Storm Drainage model file)						
30	C-STRM-STRC	C-STRMSTM-	Storm drainage, headwalls, inlets, manholes, culverts, and drainage structures	0, STRAF	0.50	C/4 C/7
31	C-STRM-IDEN	C-STRMIDM-	Storm drainage, headwall, inlet, manhole, culvert, and drainage structure annotation	0	0.35	Y/2 Y/4
Pavements/Transportation (for more detailed transportation, use the Civil - Transportation Site Plan model file)						
34	C-PVMT-ROAD	C-PVMTROM-	Roads, parking lots, railroads, airfield pavements	0, RAILRD	0.35	Y/2 Y/4
35	C-PVMT-IDEN	C-PVMTIDM-	Road, parking lot, railroad, airfield pavement annotation	0	0.35	Y/2 Y/4
36	C-PVMT-PATT	C-PVMTPAM-	Joint patterns, text and dimensions	0	0.35	Y/2 Y/4
37	C-PVMT-MRKG	C-PVMTMRM-	Pavement markings and signs	0	0.35	Y/2 Y/4
Secondary Alignments						
38	C-ALGN-SECD	C-ALGNSCM-	Secondary alignments	0	0.25	G/3 G/2
39	C-ALGN-SECD-IDEN	C-ALGNSIM-	Alignment stationing and tick marks	0	0.35	82 18
Topography						
40	C-TOPO-COOR	C-TOPOCOM-	Coordinate grid ticks and text	0	0.35	122 23
41	C-TOPO-MAJR-IDEN	C-TOPOMAM-	Major contours - annotation	0	0.35	Y/2 Y/4
42	C-TOPO-MAJR	C-TOPOMJM-	Major contours	0	0.35	Y/2 Y/4
43	C-TOPO-MINR-IDEN	C-TOPOMIM-	Minor contours - annotation	0	0.25	G/3 G/2
44	C-TOPO-MINR	C-TOPOMM-	Minor contours	0	0.25	G/3 G/2
46	C-TOPO-SLOP-IDEN	C-TOPOSLSM-	Cut/fill slope, top/toe slope annotation	0	0.35	Y/2 Y/4
47	C-TOPO-SLOP-FILL	C-TOPOSFM-	Cut/fill slopes	0	0.35	Y/2 Y/4
48	C-TOPO-SPOT	C-TOPOSPM-	Spot elevations	0	0.35	Y/2 Y/4
49	C-TOPO-SLOP-TOPT	C-TOPOSTM-	Top/toe slopes	0	0.35	M/6 M/5

Discipline: Civil**Model File Type: Site Plan**

Demolition (used only in creating Existing/Demolition model files)				
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Grading Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Borrow Areas						
21	C-BORW-LINE	C-BORWLNM-	Borrow/Spoil area	2	0.35	Y/2 Y/4
22	C-BORW-IDEN	C-BORWIDM-	Borrow/Spoil area annotation	0	0.35	Y/2 Y/4
Topography						
40	C-TOPO-COOR	C-TOPOCOM-	Coordinate grid ticks and text	0	0.35	122 23
41	C-TOPO-MAJR-IDEN	C-TOPOMAM-	Major contours - annotation	0	0.35	Y/2 Y/4
42	C-TOPO-MAJR	C-TOPOJM-	Major contours	0	0.35	Y/2 Y/4
43	C-TOPO-MINR-IDEN	C-TOPOMIM-	Minor contours - annotation	0	0.25	G/3 G/2
44	C-TOPO-MINR	C-TOPONMN-	Minor contours	0	0.25	G/3 G/2
46	C-TOPO-SLOP-IDEN	C-TOPOSIM-	Cut/fill slope, top/toe slope annotation	0	0.35	Y/2 Y/4
47	C-TOPO-SLOP-FILL	C-TOPOSFM-	Cut/fill slopes	0	0.35	Y/2 Y/4
48	C-TOPO-SPOT	C-TOPOSPM-	Spot elevations	0	0.35	Y/2 Y/4
49	C-TOPO-SLOP-TOPT	C-TOPOSTM-	Top/toe slopes	0	0.35	M/6 M/5
50	C-TOPO-BKLN	C-TOPOBKM-	Breaklines	4	0.70	W/7 W/0
51	C-TOPO-DTMT	C-TOPODTM-	DTM triangles	0	0.35	22 22
52	C-TOPO-DTMP	C-TOPODPM-	DTM points	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Dredging Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Survey Lines						
8	C-SURV-DATA	C-SURVDAM-	Survey data (benchmarks and horizontal control points or monuments)	0	0.35	M/6 M/5
9	C-SURV-LINE	C-SURVLIM-	Survey, baseline, and control lines	2	0.50	C/4 C/7
10	C-SURV-IDEN	C-SURVIDM-	Survey, baseline, and control line annotation	0	0.35	M/6 M/5
Structures						
11	C-STRC-OTLN	C-STRCOTM-	Bridges, piers, breakwaters, docks, floats, etc. - outlines	0	0.50	C/4 C/7
12	C-STRC-IDEN	C-STRCIDM-	Bridges, piers, breakwaters, docks, floats, etc. - annotation	0	0.35	Y/2 Y/4
Channels						
14	C-CHAN-LIMT	C-CHANLIM-	Channel limits, anchorages, turning basins, disposal areas, etc.	0	0.35	M/6 M/5
15	C-CHAN-IDEN	C-CHANIDM-	Channel limits, anchorages, turning basins, disposal areas, etc. - annotation	0	0.35	M/6 M/5
16	C-CHAN-DACL	C-CHANDAM-	De-authorized channel limits, anchorages, etc.	0	0.25	G/3 G/2
17	C-CHAN-DACL-IDEN	C-CHANIDM-	De-authorized channel limits, anchorages, etc. - annotation	0	0.25	G/3 G/2
18	C-CHAN-CNTR	C-CHANCNM-	Channel centerline and survey report lines	4	0.18	B/5 B/1
19	C-CHAN-CNTR-IDEN	C-CHANCIM-	Channel centerline and survey report lines - annotation	0	0.18	B/5 B/1
20	C-CHAN-AIDS	C-CHANAIM-	Navigation aids and text	0	0.35	Y/2 Y/4
21	C-CHAN-TURN	C-CHANTUM-	Turning points	0	0.35	Y/2 Y/4
Dredging						
25	C-DRED-LIMT	C-DREDLIM-	Dredge limit lines	0	0.50	C/4 C/7
26	C-DRED-OHWM	C-DREDOHM-	Ordinary high water marks	0	0.35	Y/2 Y/4
Topography						
39	C-TOPO-BORE	C-TOPOBOM-	Boring locations	0	0.35	M/6 M/5
40	C-TOPO-COOR	C-TOPOCOM-	Coordinate grid ticks and text	0	0.35	122 23
41	C-TOPO-MAJR-IDEN	C-TOPOMAM-	Major contours - annotation	0	0.35	Y/2 Y/4
42	C-TOPO-MAJR	C-TOPOMJM-	Major contours	0	0.35	Y/2 Y/4
43	C-TOPO-MINR-IDEN	C-TOPOMIM-	Minor contours - annotation	0	0.25	G/3 G/2
44	C-TOPO-MINR	C-TOPONMN-	Minor contours	0	0.25	G/3 G/2
45	C-TOPO-SHOR	C-TOPOSHM-	Shorelines, land features, and references	0	0.50	C/4 C/7
49	C-TOPO-SOUN	C-TOPOSOM-	Soundings	0	0.18	150 40
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Transportation Site Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Major Roads						
11	C-ROAD-CNTR-IDEN	C-ROADCIM-	Centerline annotation	0	0.35	M/6 M/5
12	C-ROAD-CNTR	C-ROADCTM-	Centerlines	7	0.25	R/1 R/3
13	C-ROAD-CURB	C-ROADCUM-	Curb	0	0.35	M/6 M/5
14	C-ROAD-GRAL	C-ROADGRM-	Guardrails	0	0.35	M/6 M/5
15	C-ROAD-IDEN	C-ROADIDM-	Road, curb, and guardrail annotation	0	0.35	M/6 M/5
16	C-ROAD-OTLN	C-ROADOTM-	Roads	0	0.50	C/4 C/7
Parking Lots and Minor Roads						
21	C-PKNG-CARS	C-PKNGCAM-	Graphic illustration of cars	0	0.35	Y/2 Y/4
22	C-PKNG-CNTR-IDEN	C-PKNGCIM-	Centerline annotation	0	0.35	M/6 M/5
23	C-PKNG-CNTR	C-PKNGCTM-	Centerlines	7	0.25	R/1 R/3
24	C-PKNG-CURB	C-PKNGCUM-	Curb and gutters	0	0.25	G/3 G/2
25	C-PKNG-DRAN	C-PKNGDRM-	Parking lot drainage slope indications	0	0.25	R/1 R/3
26	C-PKNG-IDEN	C-PKNGIDM-	Parking lot, minor road, and curb annotation	0	0.35	M/6 M/5
27	C-PKNG-FIXT	C-PKNGFIM-	Parking lot fixtures (e.g., wheel stops, parking meters)	0	0.25	91 106
28	C-PKNG-OTLN	C-PKNGOTM-	Parking lots and minor roads	0	0.50	C/4 C/7
Railroads						
32	C-RAIL-EQPM	C-RAILEQM-	Railroad equipment (e.g., gates, signals)	0	0.25	91 106
33	C-RAIL-CNTR-IDEN	C-RAILCIM-	Centerline annotation	0	0.35	M/6 M/5
34	C-RAIL-CNTR	C-RAILCTM-	Centerlines	7	0.25	R/1 R/3
35	C-RAIL-IDEN	C-RAILIDM-	Railroad - annotation	0	0.35	M/6 M/5
36	C-RAIL-TRAK	C-RAILTRM-	Railroads	0	0.35	Y/2 Y/4
Signage and Pavement Markings						
37	C-PVMT-MRKG	C-PVMTMRM-	Pavement markings and traffic signs	0	0.35	Y/2 Y/4
38	C-PVMT-SIGN	C-PVMTSIM-	Other signs	0	0.35	Y/2 Y/4
Pavement Types						
41	C-PVMT-ASPH	C-PVMTASM-	Pavement pattern - asphalt	0	0.18	Gr/8 Gr/9
42	C-PVMT-CONC	C-PVMTCOM-	Pavement pattern - concrete	0	0.18	Gr/8 Gr/9
43	C-PVMT-GRVL	C-PVMTGRM-	Pavement pattern - gravel	0	0.18	Gr/8 Gr/9
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Joint Layout Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Joints						
11	C-JOIN-CNSL	C-JOINSLM-	Construction joints - longitudinal	0	0.35	M/6 M/5
12	C-JOIN-CNST	C-JOINSTM-	Construction joints - transverse	0	0.35	M/6 M/5
13	C-JOIN-CNTL	C-JOINTLM-	Contraction joints - longitudinal	0	0.35	Y/2 Y/4
14	C-JOIN-CNTT	C-JOINTTM-	Contraction joints - transverse	0	0.35	Y/2 Y/4
15	C-JOIN-EXPN	C-JOINEXM-	Expansion joints	0	0.35	12 27
16	C-JOIN-EDGE	C-JOINEDM-	Thickened edges	0	0.50	C/4 C/7
Pavements						
36	C-PVMT-PATT	C-PVMTPAM-	Reinforced pavement pattern	0	0.18	Gr/8 Gr/9
Topography						
48	C-TOPO-SPOT	C-TOPOSPTM-	Spot elevations	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Airfield Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Taxiway						
11	C-TAXI-CNTR-IDEN	C-TAXICIM-	Centerline annotation	0	0.35	Y/2 Y/4
12	C-TAXI-CNTR	C-TAXICTM-	Centerlines	7	0.25	R/1 R/3
13	C-TAXI-IDEN	C-TAXIIDM-	Taxiway - annotation	0	0.35	Y/2 Y/4
15	C-TAXI-OTLN	C-TAXIOTM-	Taxiway - outlines	0	0.50	C/4 C/7
16	C-TAXI-SHLD	C-TAXISHM-	Shoulders with annotation	0	0.35	Y/2 Y/4
Apron						
18	C-APRN-CNTR-IDEN	C-APRN CIM-	Centerline annotation	0	0.35	Y/2 Y/4
19	C-APRN-CNTR	C-APRN CTM-	Centerlines	7	0.25	R/1 R/3
20	C-APRN-IDEN	C-APRN IDM-	Airfield apron - annotation	0	0.35	Y/2 Y/4
22	C-APRN-OTLN	C-APRN OTM-	Airfield apron - outlines	0	0.50	C/4 C/7
23	C-APRN-SHLD	C-APRN SHM-	Shoulders with annotation	0	0.35	Y/2 Y/4
Overrun Areas						
25	C-OVRN-CNTR-IDEN	C-OVRNCIM-	Centerline annotation	0	0.35	Y/2 Y/4
26	C-OVRN-CNTR	C-OVRN CTM-	Centerlines	7	0.25	R/1 R/3
27	C-OVRN-IDEN	C-OVRN IDM-	Airfield overrun area - annotation	0	0.35	Y/2 Y/4
29	C-OVRN-OTLN	C-OVRN OTM-	Airfield overrun area - outlines	0	0.50	C/4 C/7
Airfield Traffic Types						
31	C-TRAF-TYP A	C-TRAFTAM-	Type A traffic area	4	0.50	C/4 C/7
32	C-TRAF-TYP B	C-TRAFTBM-	Type B traffic area	6	0.50	C/4 C/7
33	C-TRAF-TYP C	C-TRAFTCM-	Type C traffic area	10	0.50	C/4 C/7
34	C-TRAF-IDEN	C-TRAFIGM-	Airfield traffic area annotation	0	0.35	Y/2 Y/4
Runway						
35	C-RUNW-CNTR	C-RUNWCTM-	Centerlines	7	0.25	R/1 R/3
36	C-RUNW-IDEN	C-RUNWIDM-	Airfield runway annotation	0	0.35	Y/2 Y/4
37	C-RUNW-EDGE	C-RUNWRUM-	Airfield runway edges	0	0.35	M/6 M/5
Obstructions						
40	C-OBST-AIRS	C-OBSTAIM-	Airspace obstructions	0	0.25	G/3 G/2
Pavement Types						
41	C-PVMT-ASPH	C-PVMTASM-	Pavement pattern - asphalt	0	0.18	Gr/8 Gr/9
42	C-PVMT-CONC	C-PVMTCOM-	Pavement pattern - concrete	0	0.18	Gr/8 Gr/9
43	C-PVMT-GRVL	C-PVMTGRM-	Pavement pattern - gravel	0	0.18	Gr/8 Gr/9
Pads (Arm/Disarm, Calibration, etc.)						
45	C-PADS-CNTR-IDEN	C-PADSCIM-	Centerline annotation	0	0.35	Y/2 Y/4
46	C-PADS-CNTR	C-PADS CTM-	Centerlines	7	0.25	R/1 R/3
47	C-PADS-IDEN	C-PADSIDM-	Pads - annotation	0	0.35	Y/2 Y/4
48	C-PADS-OTLN	C-PADSOTM-	Pad - outlines	0	0.50	C/4 C/7
49	C-PADS-SHLD	C-PADSSH M-	Shoulders with annotation	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Airfield Pavement Marking Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Taxiway						
12	C-TAXI-CNTR	C-TAXICTM-	Centerline markings	0	0.25	R/1 R/3
13	C-TAXI-IDEN	C-TAXIDM-	Annotation	0	0.35	Y/2 Y/4
14	C-TAXI-HOLD	C-TAXIHOM-	Holding lines	0	0.35	Y/2 Y/4
15	C-TAXI-EDGE	C-TAXIEDM-	Edge markings	0	0.50	C/4 C/7
16	C-TAXI-SHLD	C-TAXISHM-	Shoulder transverse stripes	0	0.35	Y/2 Y/4
Apron						
18	C-APRN-GRND	C-APRNGRM-	Grounding points	0	0.35	Y/2 Y/4
19	C-APRN-HOLD	C-APRNHOM-	Holding position markings	0	0.25	R/1 R/3
20	C-APRN-IDEN	C-APRNIDM-	Annotation	0	0.35	Y/2 Y/4
21	C-APRN-MOOR	C-APRNMMOM-	Mooring points	0	0.35	Y/2 Y/4
22	C-APRN-MRKG	C-APRNMRM-	Apron markings	0	0.50	C/4 C/7
23	C-APRN-SHLD	C-APRNSHM-	Shoulder stripes	0	0.35	Y/2 Y/4
24	C-APRN-SECU	C-APRNSEM-	Security zone markings	0	0.25	R/1 R/3
OVERRUN Areas						
29	C-OVRN-SHLD	C-OVRNSHM-	Shoulder markings	0	0.50	C/4 C/7
Precision and Nonprecision Runways						
32	C-RUNW-BLST	C-RUNWBLM-	Blast pad and stopway markings	0	0.25	R/1 R/3
33	C-RUNW-DIST	C-RUNWDIM-	Fixed distance markings	0	0.25	R/1 R/3
34	C-RUNW-DISP	C-RUNWDSM-	Displaced threshold markings	0	0.25	R/1 R/3
35	C-RUNW-CNTR	C-RUNWCNM-	Centerline markings	0	0.25	R/1 R/3
36	C-RUNW-IDEN	C-RUNWIDM-	Runway numbers and letters	0	0.35	Y/2 Y/4
37	C-RUNW-SHLD	C-RUNWSHM-	Shoulder markings	0	0.35	M/6 M/5
38	C-RUNW-SIDE	C-RUNWSIM-	Side stripes	0	0.50	C/4 C/7
39	C-RUNW-TDZM	C-RUNWTDM-	Touchdown zone markers	0	0.35	M/6 M/5
40	C-RUNW-THRS	C-RUNWTHM-	Threshold markers	0	0.35	M/6 M/5
Heliports						
41	C-HELI-BLST	C-HELIBLM-	Blast pad and stopway markings	0	0.25	R/1 R/3
42	C-HELI-DIST	C-HELIDIM-	Fixed distance markings	0	0.25	R/1 R/3
43	C-HELI-DISP	C-HELIDSM-	Displaced threshold markings	0	0.25	R/1 R/3
44	C-HELI-CNTR	C-HELICNM-	Centerline markings	0	0.25	R/1 R/3
45	C-HELI-IDEN	C-HELIIDM-	Heliport numbers and letters	0	0.35	Y/2 Y/4
46	C-HELI-SHLD	C-HELISHM-	Shoulder markings	0	0.35	M/6 M/5
47	C-HELI-SIDE	C-HELISIM-	Side stripes	0	0.50	C/4 C/7
48	C-HELI-TDZM	C-HELTIDM-	Touchdown zone markers	0	0.35	M/6 M/5
49	C-HELI-THRS	C-HELITHM-	Threshold markers	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Domestic Water Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-DOMW-DEVC	C-DOMWDEM-	Connectors, faucets, reducers, regulators, vents, intake points, tanks, taps, backflow preventers, and valves	0	0.35	M/6 M/5
12	C-DOMW-HYDR	C-DOMWHYM-	Hydrants	0	0.25	R/1 R/3
13	C-DOMW-METR	C-DOMWMEM-	Meters	0	0.25	G/3 G/2
14	C-DOMW-NHYD	C-DOMWNHM-	Non-potable hydrants/flushing hydrants	0	0.25	R/1 R/3
Stations						
16	C-DOMW-PUMP	C-DOMWPUM-	Booster pump stations	0	0.35	M/6 M/5
17	C-DOMW-REDC	C-DOMWREM-	Pressure reducing stations	0	0.35	M/6 M/5
18	C-DOMW-STNS-IDEN	C-DOMWSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	C-DOMW-RSRV-IDEN	C-DOMWRIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
20	C-DOMW-RSRV	C-DOMWRSIM-	Reservoirs	0	0.25	R/1 R/3
21	C-DOMW-TANK	C-DOMWTAM-	Water storage tanks	0	0.25	R/1 R/3
22	C-DOMW-WELL	C-DOMWWEM-	Water well houses	0	0.25	R/1 R/3
Pits						
26	C-DOMW-PITS-IDEN	C-DOMWPIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	C-DOMW-VENT	C-DOMVVEM-	Vent pits	0	0.25	G/3 G/2
28	C-DOMW-VLVE	C-DOMVLVM-	Valve pits/vaults	0	0.25	G/3 G/2
Piping						
32	C-DOMW-ABND	C-DOMWABM-	Abandoned piping	2	0.35	M/6 M/5
37	C-DOMW-FTTG	C-DOMWFTM-	Caps, cleanouts, crosses, and tees	0	0.35	M/6 M/5
40	C-DOMW-IDEN	C-DOMWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	C-DOMW-MAIN	C-DOMWMAM-	Main domestic water piping	WATERL	0.35	M/6 M/5
44	C-DOMW-NPOT	C-DOMWNPM-	Non-potable water piping	NONPOT	0.35	M/6 M/5
45	C-DOMW-FIRE	C-DOMWFIM-	Fire lines	FIRE	0.25	R/1 R/3
46	C-DOMW-SERV	C-DOMWSEM-	Domestic water service piping	0	0.35	M/6 M/5
47	C-DOMW-SIGN	C-DOMWSIM-	Surface markers/signs	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Sanitary Sewer Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-SSWR-DEVC	C-SSWRDEM-	Grease traps, grit chambers, flumes, neutralizers, oil/water separators, ejectors, and valves	0	0.35	M/6 M/5
12	C-SSWR-DEV-C-IDEN	C-SSWRDIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
Stations						
15	C-SSWR-PLNT	C-SSWRPLM-	Treatment plants	0	0.35	M/6 M/5
16	C-SSWR-PUMP	C-SSWRPUM-	Booster pump stations	0	0.35	M/6 M/5
18	C-SSWR-STNS-IDEN	C-SSWRSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	C-SSWR-RSVR-IDEN	C-SSWRRIM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
20	C-SSWR-LAGN	C-SSWRLAGM-	Lagoons	0	0.25	G/3 G/2
21	C-SSWR-TANK	C-SSWRTAM-	Septic tanks	0	0.25	G/3 G/2
Junction Boxes						
22	C-SSWR-JBOX	C-SSWRJBM-	Junction boxes and manholes	0	0.25	R/1 R/3
23	C-SSWR-JBOX-IDEN	C-SSWRJIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
Filtration/Drainage Areas						
26	C-SSWR-FILT	C-SSWRFIM-	Filtration beds	0	0.25	G/3 G/2
27	C-SSWR-FILT-IDEN	C-SSWRFDM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
28	C-SSWR-NITF	C-SSWRNIM-	Nitrification drain fields	0	0.25	G/3 G/2
29	C-SSWR-LEAC	C-SSWRLEM-	Leach field	0	0.25	G/3 G/2
Piping						
32	C-SSWR-ABND	C-SSWRABM-	Abandoned piping	2	0.35	M/6 M/5
33	C-SSWR-FLOW	C-SSWRFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	C-SSWR-FTTG	C-SSWRFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	C-SSWR-IDEN	C-SSWRIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	C-SSWR-MAIN	C-SSWRMAM-	Sanitary sewer piping	SSWAF	0.35	M/6 M/5
46	C-SSWR-SERV	C-SSWRSEM-	Sanitary sewer service piping	0	0.25	R/1 R/3
47	C-SSWR-SIGN	C-SSWRSIM-	Surface markers/signs	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Storm Sewer Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-STRM-DEVC	C-STRMDEM-	Downspouts, flumes, oil/water separators, and flap gates	0	0.35	M/6 M/5
Stations						
16	C-STRM-PUMP	C-STRMPUM-	Pump stations	0	0.35	M/6 M/5
17	C-STRM-FMON	C-STRMFMM-	Flow monitoring station	0	0.35	M/6 M/5
18	C-STRM-STNS-IDEN	C-STRMSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs/Watersheds						
19	C-STRM-RSVR-IDEN	C-STRMRIM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
20	C-STRM-LAGN	C-STRMLAM-	Lagoons, ponds, watersheds, and basins	0	0.25	G/3 G/2
21	C-STRM-AFFF	C-STRMAFM-	AFFF lagoon/detention pond	0	0.25	G/3 G/2
Drainage Structures						
22	C-STRM-MHOL	C-STRMMHM-	Manholes	0	0.25	R/1 R/3
26	C-STRM-DRAN-IDEN	C-STRMDRM-	Identifier tags, symbol modifier, and text	0	0.25	G/3 G/2
27	C-STRM-EROS	C-STRMERM-	Erosion control (riprap)	0	0.18	B/5 B/1
28	C-STRM-CHUT	C-STRMCHM-	Chutes and concrete erosion control structures	0	0.25	R/1 R/3
29	C-STRM-HDWL	C-STRMHDM-	Headwalls and endwalls	0	0.70	W/7 W/0
30	C-STRM-INLT	C-STRMINM-	Inlets (curb, surface, and catch basins	0	0.25	G/3 G/2
Piping						
32	C-STRM-ABND	C-STRMABM-	Abandoned piping	2	0.35	M/6 M/5
33	C-STRM-FLOW	C-STRMFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	C-STRM-FTTG	C-STRMFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	C-STRM-IDEN	C-STRMIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
42	C-STRM-CULV	C-STRMCCLM-	Culverts	CULVRT	0.25	G/3 G/2
43	C-STRM-MAIN	C-STRMMAM-	Storm sewer piping	STRAF	0.35	M/6 M/5
44	C-STRM-SUBS	C-STRMSUM-	Subsurface drain piping	0	0.25	G/3 G/2
45	C-STRM-ROOF	C-STRMROM-	Roof drain line	0	0.25	G/3 G/2
46	C-STRM-SERV	C-STRMSEM-	Storm sewer service piping	0	0.25	R/1 R/3
47	C-STRM-SIGN	C-STRMSIM-	Surface markers/signs	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Industrial Waste Water Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-INDW-DEVC	C-INDWDEM-	Grit chambers, meters, flumes, neutralizers, oil/water separators, ejectors, tanks, and valves	0	0.35	M/6 M/5
Stations						
15	C-INDW-PLNT	C-INDWPLM-	Treatment plants	0	0.35	M/6 M/5
16	C-INDW-LIFT	C-INDWLIM-	Lift stations	0	0.35	M/6 M/5
18	C-INDW-STNS-IDEN	C-INDWSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
19	C-INDW-RSVR-IDEN	C-INDWRIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
20	C-INDW-LAGN	C-INDWLAM-	Lagoons	0	0.35	M/6 M/5
Junction Boxes						
22	C-INDW-JBOX	C-INDWJBM-	Junction boxes and manholes	0	0.25	R/1 R/3
Piping						
32	C-INDW-ABND	C-INDWABM-	Abandoned piping	2	0.35	M/6 M/5
33	C-INDW-FLOW	C-INDWFLM-	Flow direction arrows	0	0.35	M/6 M/5
37	C-INDW-FTTG	C-INDWFTM-	Caps and cleanouts	0	0.35	M/6 M/5
40	C-INDW-IDEN	C-INDWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	C-INDW-MAIN	C-INDWMAM-	Main industrial waste water piping	IWASTE	0.35	M/6 M/5
46	C-INDW-SERV	C-INDWSEM-	Industrial waste water service piping	0	0.25	R/1 R/3
47	C-INDW-SIGN	C-INDWSIM-	Surface markers/signs	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Natural Gas Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-NGAS-DEVC	C-NGASDEM-	Hydrant fill points, lights, vents, markers, rectifiers, reducers, regulators, sources, tanks, drip pots, taps, and valves	0	0.35	M/6 M/5
12	C-NGAS-DEV-C-IDEN	C-NGASDIM-	Identifier tags, symbol modifier, and text	0	0.35	M/6 M/5
13	C-NGAS-METR	C-NGASMEM-	Meters	0	0.25	G/3 G/2
Stations						
16	C-NGAS-PUMP	C-NGASPUM-	Compressor stations	0	0.35	M/6 M/5
17	C-NGAS-REDC	C-NGASREM-	Reducing stations	0	0.35	M/6 M/5
18	C-NGAS-STNS-IDEN	C-NGASSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Pits						
26	C-NGAS-PITS-IDEN	C-NGASPIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	C-NGAS-VENT	C-NGASVEM-	Vent pits	0	0.25	G/3 G/2
28	C-NGAS-VLVE	C-NGASVLM-	Valve pits/boxes	0	0.25	G/3 G/2
Piping						
32	C-NGAS-ABND	C-NGASABM-	Abandoned piping	2	0.35	M/6 M/5
33	C-NGAS-FLOW	C-NGASFLM-	Flow direction arrows	0	0.25	M/6 M/5
37	C-NGAS-FTTG	C-NGASFTM-	Caps, crosses, and tees	0	0.35	M/6 M/5
40	C-NGAS-IDEN	C-NGASIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	C-NGAS-MAIN	C-NGASMAM-	Main natural gas piping	NTGASN	0.35	M/6 M/5
46	C-NGAS-SERV	C-NGASSEM-	Service piping	0	0.25	R/1 R/3
47	C-NGAS-SIGN	C-NGASSIM-	Surface markers/signs	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Liquid Fuel Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Devices						
11	C-FUEL-DEVC	C-FUELDEM-	Air eliminators, filter strainers, hydrant fill points, line vents, markers, oil/water separators, reducers, regulators, and valves	0	0.35	M/6 M/5
13	C-FUEL-METR	C-FUELMEM-	Meters	0	0.25	G/3 G/2
Stations						
16	C-FUEL-PUMP	C-FUELPU-	Booster pump stations	0	0.35	M/6 M/5
18	C-FUEL-STNS-IDEN	C-FUELSIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
Reservoirs						
21	C-FUEL-TANK	C-FUELtam-	Fuel tanks	0	0.25	G/3 G/2
Junction Boxes						
22	C-FUEL-JBOX	C-FUELJBM-	Junction boxes, manholes, handholes, test boxes	0	0.25	R/1 R/3
Pits						
25	C-FUEL-HYDR	C-FUELHYM-	Hydrant control pits	0	0.25	G/3 G/2
26	C-FUEL-PITS-IDEN	C-FUELPIM-	Identifier tags, symbol modifier, and text	0	0.25	R/1 R/3
27	C-FUEL-VENT	C-FUELVEM-	Vent pits	0	0.25	G/3 G/2
28	C-FUEL-VLVE	C-FUELVLM-	Valve pits	0	0.25	G/3 G/2
29	C-FUEL-TRCH	C-FUELTRM-	Fuel line trench	0	0.25	G/3 G/2
Piping						
32	C-FUEL-ABND	C-FUELABM-	Abandoned piping	2	0.35	M/6 M/5
33	C-FUEL-FLOW	C-FUELFLM-	Flow direction arrows	0	0.35	M/6 M/5
36	C-FUEL-DEFL	C-FUELDEM-	Defueling piping	0	0.35	M/6 M/5
37	C-FUEL-FTTG	C-FUELFTM-	Caps, crosses, and tees	0	0.35	M/6 M/5
40	C-FUEL-IDEN	C-FUELIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	C-FUEL-MAIN	C-FUELMAM-	Main fuel piping	LIQPET	0.35	M/6 M/5
46	C-FUEL-SERV	C-FUELSEM-	Service piping	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Profiles

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	C-ANNO-REFR	C-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Alignments						
8	C-ALGN-DATA	C-ALGNDAM-	Alignment coordinates and curve data	0	0.25	G/3 G/2
9	C-ALGN-LINE	C-ALGNLIM-	Alignments	4	0.35	Y/2 Y/4
10	C-ALGN-STAT	C-ALGNSTM-	Alignment stationing and tick marks	0	0.25	G/3 G/2
Crossing Elements - Use symbology from previous model files						
Grade Linework						
41	C-GRAD-FNSH	C-GRADFNM-	Finished grade	0	0.50	C/4 C/7
44	C-GRAD-EXST	C-GRADEXM-	Existing grade, ground line	3	0.35	M/6 M/5
Grid Lines						
48	C-GRID-MAJR	C-GRIDMAM-	Major grid lines	0	0.25	R/1 R/3
49	C-GRID-MINR	C-GRIDMIM-	Minor grid lines	1	0.18	Gr/8 Gr/9
50	C-GRID-FRAM	C-GRIDFRM-	Frame	0	0.50	C/4 C/7
51	C-GRID-TEXT	C-GRIDTEM-	Border text, annotation	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: Elevations

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	C-ANNO-KEYN	C----KEP-	Reference keynotes with associated leaders	0	V	V V
3	C-ANNO-NPLT	C----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	C-ANNO-REFR	C----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Elevations						
38	C-ELEV-FIXT	C-ELEVFM-	Miscellaneous fixtures	0	0.35	Y/2 Y/4
40	C-ELEV-IDEN	C-ELEVIDM-	Component identification numbers	0	0.35	Y/2 Y/4
41	C-ELEV-OTLN	C-ELEVOTM-	Building outlines	0	0.35	M/6 M/5
42	C-ELEV-PATT	C-ELEVPM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
44	C-ELEV-SIGN	C-ELEVSM-	Signage	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Model File Type: X-Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	C-ANNO-SYMB	C-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	C-ANNO-TEXT	C-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	C-ANNO-REFR	C-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Crossing Elements - Use symbology from previous model files						
Sections						
35	C-SECT-IDEN	C-SECTIDM-	Component identification numbers	0	0.35	Y/2 Y/4
36	C-SECT-MBND	C-SECTMBM-	Material beyond section cut	0	0.18	B/5 B/1
37	C-SECT-MCUT	C-SECTMCM-	Material cut by section	0	0.50	C/4 C/7
38	C-SECT-PATT	C-SECTPAM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
Grade Linework						
41	C-GRAD-FNSH	C-GRADFNM-	Finished grade	0	0.50	C/4 C/7
44	C-GRAD-EXST	C-GRADEXM-	Existing grade, ground line	3	0.35	M/6 M/5
Grid Lines						
48	C-GRID-MAJR	C-GRIDMAM-	Major grid lines	0	0.25	R/1 R/3
49	C-GRID-MINR	C-GRIDMIM-	Minor grid lines	1	0.18	Gr/8 Gr/9
50	C-GRID-FRAM	C-GRIDFRM-	Frame	0	0.50	C/4 C/7
51	C-GRID-TEXT	C-GRIDTEM-	Border text, annotation	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Civil**Model File Type: Details**

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	C-ANNO-DIMS	C-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	C-ANNO-KEYN	C-----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	C-ANNO-NPLT	C-----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	C-ANNO-PATT	C-----PAP-	Miscellaneous patterning	0	0.18	Gr/8	Gr/9
5	C-ANNO-NOTE	C-----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	C-ANNO-SYMB	C-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6	M/5
7	C-ANNO-TEXT	C-----TEP-	Detail title text, text and associated leaders, notes	V	V	V	V
Detail Information							
11	C-DETL-GRPH	C-DETLGRM-	Graphics, gridlines, non-text items	V	V	V	V
12	C-DETL-METR	C-DETLMEM-	Metric-specific dimensions and notes	0	0.25	G/3	G/2
13	C-DETL-INPD	C-DETLINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1	R/3
Demolition							
56	C-STAT-DEMO-PHS1	C-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	C-STAT-DEMO-PHS2	C-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	C-STAT-DEMO-PHS3	C-----M-D----3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Landscape

Model File Type: Landscape Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	L-ANNO-DIMS	L----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	L-ANNO-KEYN	L----KEP-	Reference keynotes with associated leaders	0	V	V V
3	L-ANNO-NPLT	L----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	L-ANNO-PATT	L----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	L-ANNO-NOTE	L----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	L-ANNO-SYMB	L----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	L-ANNO-TEXT	L----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	L-ANNO-REFR	L----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Site Improvements						
11	L-SITE-BRDG	L-SITEBRM-	Bridges	0	0.35	22 22
12	L-SITE-DECK	L-SITEDEM-	Decks	0	0.35	232 107
13	L-SITE-FENC	L-SITEFEM-	Fencing	0	0.35	Y/2 Y/4
14	L-SITE-FURN	L-SITEFUM-	Furnishings	0	0.50	C/4 C/7
15	L-SITE-IDEN	L-SITEIDM-	Annotation	0	0.35	M/6 M/5
16	L-SITE-PLAY	L-SITEPLM-	Play structures	0	0.35	Y/2 Y/4
17	L-SITE-POOL	L-SITEPOM-	Pools and spas	0	0.35	162 33
18	L-SITE-ROCK	L-SITEROM-	Boulders and cobble	0	0.25	R/1 R/3
19	L-SITE-SPRT	L-SITESPM-	Sports fields	0	0.35	Y/2 Y/4
20	L-SITE-WALK	L-SITEWAM-	Walks and steps	0	V	V V
21	L-SITE-RTWL	L-SITERTM-	Retaining walls	0	0.50	C/4 C/7
Landscape Plants						
23	L-PLNT-BEDS	L-PLNTBEM-	Planting beds	0	0.35	M/6 M/5
24	L-PLNT-TURF	L-PLNTTUM-	Lawn areas (turfing limits)	0	0.50	23 46
25	L-PLNT-MLCH	L-PLNTMLM-	Mulches - organic and inorganic	0	0.25	G/3 G/2
26	L-PLNT-GRND	L-PLNTGRM-	Groundcover and vines	0	0.35	82 18
27	L-PLNT-IDEN	L-PLNTIDM-	Annotation	0	0.35	M/6 M/5
28	L-PLNT-PLTS	L-PLNTPLM-	Planting plants (e.g., ornamental annuals and perennials)	0	0.50	83 42
29	L-PLNT-BUSH-LINE	L-PLNTBLM-	Bush and shrub line	0	0.50	83 42
30	L-PLNT-BUSH	L-PLNTBUM-	Bushes and shrubs (e.g., evergreen, deciduous)	0	0.50	83 42
31	L-PLNT-TREE-LINE	L-PLNTTLM-	Tree line	TREEL	0.50	83 42
32	L-PLNT-TREE	L-PLNTTRM-	Trees (e.g., evergreen, deciduous, etc.)	0	0.50	83 42
33	L-PLNT-SPRG	L-PLNTSPM-	Sprigs	0	0.25	G/3 G/2
34	L-PLNT-CTNR	L-PLNTCTM-	Containers or planters	0	0.25	R/1 R/3
35	L-PLNT-SHAD	L-PLNTSHM-	Shadow areas	0	0.18	B/5 B/1
Demolition (used only in creating Existing/Demolition model files)						
56	L-STAT-DEMO-PHS1	L-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	L-STAT-DEMO-PHS2	L-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	L-STAT-DEMO-PHS3	L-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Landscape

Model File Type: Irrigation Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/ #	MicroStation Line Color/ #
General Information							
1	L-ANNO-DIMS	L----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	L-ANNO-KEYN	L----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	L-ANNO-NPLT	L----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	L-ANNO-PATT	L----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	L-ANNO-NOTE	L----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	L-ANNO-SYMB	L----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	L-ANNO-TEXT	L----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	L-ANNO-REFR	L----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Irrigation System							
25	L-IRRG-COVR	L-IRRGCOM-	Irrigation coverage, spray distribution patterns	0	0.18	B/5	B/1
26	L-IRRG-EQPM	L-IRRGEQM-	Equipment (e.g., controllers, valves, RPBP's, etc.)	0	0.35	M/6	M/5
27	L-IRRG-IDEN	L-IRRGIDM-	Annotation	0	0.35	Y/2	Y/4
28	L-IRRG-PIPE	L-IRRGPIM-	Piping	LAWNSP	0.35	M/6	M/5
31	L-IRRG-SPKL	L-IRRGSPM-	Sprinklers	0	0.35	M/6	M/5
34	L-IRRG-HEAD	L-IRRGHEM-	Irrigation heads, bubblers, and drip irrigation emitter:	0	0.25	R/1	R/3
Demolition (used only in creating Existing/Demolition model files)							
56	L-STAT-DEMO-PHS1	L-----M-D---1	Demolition - phase 1	0	0.50	203	45
57	L-STAT-DEMO-PHS2	L-----M-D---2	Demolition - phase 2	0	0.50	83	42
58	L-STAT-DEMO-PHS3	L-----M-D---3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Landscape

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	L-ANNO-DIMS	L-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	L-ANNO-KEYN	L-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	L-ANNO-NPLT	L-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	L-ANNO-PATT	L-----PAP-	Miscellaneous patterning	0	0.18	Gr/8 Gr/9
5	L-ANNO-NOTE	L-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	L-ANNO-SYMB	L-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	L-ANNO-TEXT	L-----TEP-	Detail title text, text and associated leaders, notes	V	V V	V
Detail Information						
11	L-DETL-GRPH	L-DETLGRM-	Graphics, gridlines, non-text items	V	V	V
12	L-DETL-METR	L-DETLMEM-	Metric-specific dimensions and notes	0	0.25	G/3 G/2
13	L-DETL-INPD	L-DETLINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1 R/3
Demolition						
56	L-STAT-DEMO-PHS1	L-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	L-STAT-DEMO-PHS2	L-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	L-STAT-DEMO-PHS3	L-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Foundation Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	S-ANNO-DIMS	S----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	S-ANNO-KEYN	S----KEP-	Reference keynotes with associated leaders	0	V	V
3	S-ANNO-NPLT	S----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	S-ANNO-PATT	S----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	S-ANNO-NOTE	S----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	S-ANNO-SYMB	S----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	S-ANNO-TEXT	S----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	S-ANNO-REFR	S----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Foundation						
11	S-FNDN-CNTR	S-FNDNCNM-	Beam centerlines	7	0.18	B/5 B/1
16	S-FNDN-FTNG	S-FNDNFTM-	Footings	0, 2	0.50	C/4 C/7
17	S-FNDN-GRBM	S-FNDNGRM-	Grade beams	0, 2	0.50	C/4 C/7
18	S-FNDN-PEDS	S-FNDNPEM-	Column pedestals	0, 2	0.50	C/4 C/7
19	S-FNDN-PILE	S-FNDNPIM-	Piles (steel sheet, concrete, wood), piers, caisson piers, drilled piers	0, 2	0.35	Y/2 Y/4
20	S-FNDN-RBAR	S-FNDNRBM-	Foundation reinforcing	0, 2	0.70	W/7 W/0
Slabs						
21	S-SLAB-OPEN	S-SLABOPM-	Openings and penetrations	0, 2	0.25	R/1 R/3
26	S-SLAB-EDGE	S-SLABEDM-	Edge of slab	0, 2	0.35	Y/2 Y/4
28	S-SLAB-RBAR	S-SLABRBM-	Slab reinforcing	0, 2	0.70	W/7 W/0
Grating						
30	S-GRAT-ELEV	S-GRATELM-	Elevated grating (catwalks)	0, 2	0.25	G/3 G/2
31	S-GRAT-FLOR	S-GRATFLM-	Floor grating	0, 2	0.25	G/3 G/2
Joints						
33	S-JOIN-CNST	S-JOINCNM-	Construction joints	0	0.25	G/3 G/2
34	S-JOIN-CTRL	S-JOINCTM-	Control/expansion joints	0	0.25	R/1 R/3
Miscellaneous Supports						
35	S-SPPT-MISC	S-SPPTMIM-	Miscellaneous fasteners, anchor bolts, supports	0, 2	0.25	G/3 G/2
36	S-SPPT-SHPS	S-SPPTSHM-	Miscellaneous shapes, plates	0, 2	0.25	G/3 G/2
Stairs and Elevators						
38	S-STRS-FRAM	S-STRSFRM-	Stair/elevator framing	0, 2	0.35	M/6 M/5
39	S-STRS-LADD	S-STRSLAM-	Ladders, ladder handrails, safety guard, grab bars	0, 2	0.25	G/3 G/2
40	S-STRS-RBAR	S-STRSRBM-	Stair reinforcing	0, 2	0.70	W/7 W/0
Walls						
43	S-WALL-CONC	S-WALLCOM-	Concrete walls	0, 2	0.35	Y/2 Y/4
44	S-WALL-LOAD	S-WALLLOM-	Load bearing CMU walls	0, 2	0.35	Y/2 Y/4
45	S-WALL-NONL	S-WALLNOM-	Non-load bearing CMU walls	0, 2	0.35	M/6 M/5
46	S-WALL-PCST	S-WALLPCM-	Precast walls	0, 2	0.35	Y/2 Y/4
47	S-WALL-STUD	S-WALLSTM-	Stud walls	0, 2	0.35	Y/2 Y/4
48	S-WALL-RBAR	S-WALLRBM-	Wall reinforcing	0, 2	0.70	W/7 W/0
Pads						
49	S-PADS-EQPM	S-PADSEQM-	Equipment pads	0, 2	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Framing Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	S-ANNO-DIMS	S----DIP-	Witness/extension lines, dimension terminators, dimension text, welding symbols	0	V	V V V
2	S-ANNO-KEYN	S----KEP-	Reference keynotes with associated leaders	0	V	V V V
3	S-ANNO-NPLT	S----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	S-ANNO-PATT	S----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	S-ANNO-NOTE	S----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	S-ANNO-SYMB	S----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	S-ANNO-TEXT	S----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V V
NA	S-ANNO-REFR	S----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA NA
Beams						
11	S-BEAM-CNTR	S-BEAMCNM-	Beam centerlines	7	0.18	B/5 B/1
12	S-BEAM-PRIM	S-BEAMPRM-	Primary beams, girders	0, 2	0.50	C/4 C/7
13	S-BEAM-SECD	S-BEAMSCM-	Secondary beams, girders	0, 2	0.35	M/6 M/5
Bracing						
16	S-BRAC-LATL	S-BRACLAM-	Lateral bracing	0, 2	0.35	Y/2 Y/4
17	S-BRAC-SHEA	S-BRACSHM-	Shear walls	0, 2	0.35	Y/2 Y/4
18	S-BRAC-VERT	S-BRACVEM-	Vertical bracing	0, 2	0.35	Y/2 Y/4
Deck						
19	S-DECK-FLOR	S-DECKFLM-	Floor deck	0, 2	0.25	G/3 G/2
20	S-DECK-RBAR	S-DECKRBM-	Deck/slab reinforcing	0, 2	0.70	W/7 W/0
21	S-DECK-OPEN	S-DECKOPM-	Openings and penetrations	0, 2	0.25	R/1 R/3
22	S-DECK-ROOF	S-DECKROM-	Roof deck	0	0.25	G/3 G/2
Open Web Joists						
23	S-JOIS-PRIM	S-JOISPRM-	Primary joists	0, 2	0.50	C/4 C/7
24	S-JOIS-SECD	S-JOISSCM-	Secondary joists	0, 2	0.35	M/6 M/5
25	S-JOIS-BRDG	S-JOISBRM-	Bridging	2	0.25	R/1 R/3
Miscellaneous Metal						
29	S-METL-MISC	S-METLMIM-	Miscellaneous metal	0, 2	0.35	M/6 M/5
Joints						
33	S-JOIN-CNST	S-JOINCNM-	Construction joints	0	0.25	G/3 G/2
34	S-JOIN-CTRL	S-JOINCTM-	Control/expansion joints	0	0.25	R/1 R/3
Miscellaneous Supports						
35	S-SPPT-MISC	S-SPPTMIM-	Miscellaneous fasteners, anchor bolts, supports	0, 2	0.25	G/3 G/2
36	S-SPPT-SHPS	S-SPPTSHM-	Miscellaneous shapes, plates	0, 2	0.25	G/3 G/2
Stairs and Elevators						
38	S-STRS-FRAM	S-STRSFRM-	Stair/elevator framing	0, 2	0.35	M/6 M/5
39	S-STRS-LADD	S-STRSLAM-	Ladders, ladder handrails, safety guard, grab bars	0, 2	0.25	G/3 G/2
40	S-STRS-RBAR	S-STRSRBM-	Stair reinforcing	0, 2	0.70	W/7 W/0
Trusses						
41	S-TRUS-PRIM	S-TRUSPRM-	Primary trusses	0, 2	0.50	C/4 C/7
42	S-TRUS-SECD	S-TRUSSCM-	Secondary trusses	0, 2	0.35	M/6 M/5
Walls						
43	S-WALL-CONC	S-WALLCOM-	Concrete walls	0, 2	0.35	Y/2 Y/4
44	S-WALL-LOAD	S-WALLLOM-	Load bearing CMU walls	0, 2	0.35	Y/2 Y/4
45	S-WALL-NONL	S-WALLNOM-	Non-load bearing CMU walls	0, 2	0.35	M/6 M/5
46	S-WALL-PCST	S-WALLPCM-	Precast walls	0, 2	0.35	Y/2 Y/4
47	S-WALL-STUD	S-WALLSTM-	Stud walls	0, 2	0.35	Y/2 Y/4
48	S-WALL-RBAR	S-WALLRBM-	Wall reinforcing	0, 2	0.70	W/7 W/0
Demolition (used only in creating Existing/Demolition model files)						
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Column Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	S-ANNO-DIMS	S----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	S-ANNO-KEYN	S----KEP-	Reference keynotes with associated leaders	0	V	V
3	S-ANNO-NPLT	S----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	S-ANNO-PATT	S----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	S-ANNO-NOTE	S----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	S-ANNO-SYMB	S----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	S-ANNO-TEXT	S----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	S-ANNO-REFR	S----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Grid Lines						
8	S-GRID-IDEN	S-GRIDIDM-	Column I.D. tags	0	0.25	R/1 R/3
9	S-GRID-HORZ	S-GRIDHOM-	Primary grid lines (horizontal)	7	0.18	B/5 B/1
10	S-GRID-VERT	S-GRIDVEM-	Primary grid lines (vertical)	7	0.18	B/5 B/1
11	S-GRID-MSC1	S-GRIDM1M-	Miscellaneous grid lines (Type 1)	0	0.18	Gr/8 Gr/9
12	S-GRID-MSC2	S-GRIDM2M-	Miscellaneous grid lines (Type 2)	0	0.18	Gr/8 Gr/9
13	S-GRID-MSC3	S-GRIDM3M-	Miscellaneous grid lines (Type 3)	0	0.18	Gr/8 Gr/9
14	S-GRID-MSC4	S-GRIDM4M-	Miscellaneous grid lines (Type 4)	0	0.18	Gr/8 Gr/9
Columns						
16	S-COLS-CNTR	S-COLSCNM-	Column centerlines/working lines	7	0.18	10 10
17	S-COLS-PRIM	S-COLSPRM-	Primary columns	0	0.35	M/6 M/5
18	S-COLS-SCND	S-COLSSCM-	Secondary columns	0	0.35	Y/2 Y/4
19	S-COLS-MSC1	S-COLSM1M-	Miscellaneous columns (Type 1)	0	0.35	22 22
20	S-COLS-MSC2	S-COLSM2M-	Miscellaneous columns (Type 2)	0	0.35	22 22
21	S-COLS-MSC3	S-COLSM3M-	Miscellaneous columns (Type 3)	0	0.35	22 22
22	S-COLS-MSC4	S-COLSM4M-	Miscellaneous columns (Type 4)	0	0.35	22 22
Demolition (used only in creating Existing/Demolition model files)						
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Non-Building Structures

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	S-ANNO-DIMS	S----DIP-	Witness/extension lines, dimension terminators, dimension text, welding symbols	0	V	V	V
2	S-ANNO-KEYN	S----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	S-ANNO-NPLT	S----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	S-ANNO-PATT	S----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	S-ANNO-NOTE	S----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	S-ANNO-SYMB	S----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	S-ANNO-TEXT	S----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	S-ANNO-REFR	S----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Features							
9	S-FEAT-GENL	S-FEATGEM-	General features (miscellaneous items)	0, 2	0.35	M/6	M/5
10	S-FEAT-CMUW	S-FEATCMM-	CMU outline (no patterning)	0, 2	0.35	Y/2	Y/4
11	S-FEAT-CNTR	S-FEATCNM-	Feature centerlines	7	0.18	B/5	B/1
15	S-FEAT-CONC	S-FEATCOM-	Concrete outline (no patterning)	0, 2	0.35	M/6	M/5
20	S-FEAT-WOOD	S-FEATWOM-	Wood outline (no patterning)	0, 2	0.35	Y/2	Y/4
Foundation							
19	S-FNDN-PILE	S-FNDNPIM-	Piles (steel sheet, concrete, wood), piers, caisson piers, drilled pier:	0, 2	0.35	Y/2	Y/4
Openings							
21	S-OPEN-MISC	S-OPENMIM-	Openings and penetrations	0, 2	0.25	R/1	R/3
Piping							
25	S-PIPE-MISC	S-PIPEMIM-	Miscellaneous piping/culverts	0, 2	0.35	Y/2	Y/4
26	S-PIPE-GATE	S-PIPEGAM-	Gates (flap gates, sluice gates, other)	0, 2	0.25	G/3	G/2
27	S-PIPE-TRSH	S-PIPETRM-	Trash racks	0, 2	0.25	G/3	G/2
Grating							
30	S-GRAT-ELEV	S-GRATELM-	Elevated grating (catwalks)	0, 2	0.25	G/3	G/2
31	S-GRAT-FLOR	S-GRATFLM-	Floor/surface grating, manhole covers/frames	0, 2	0.25	G/3	G/2
32	S-GRAT-SUBS	S-GRATSUM-	Subsurface grating	0, 2	0.25	G/3	G/2
Joints							
33	S-JOIN-CNST	S-JOINCNM-	Construction joints	0	0.25	G/3	G/2
34	S-JOIN-CTRL	S-JOINCTM-	Control/expansion joints, joint materials (e.g., felt), vapor barrier, waterstops, other	0	0.25	R/1	R/3
Miscellaneous Supports							
35	S-SPPT-MISC	S-SPPTMIM-	Miscellaneous fasteners, anchor bolts, supports	0, 2	0.25	G/3	G/2
36	S-SPPT-SHPS	S-SPPTSHM-	Miscellaneous shapes, plates	0, 2	0.25	G/3	G/2
Stairs and Elevators							
38	S-STRS-FRAM	S-STRSFRM-	Stair/elevator framing	0, 2	0.35	M/6	M/5
39	S-STRS-LADD	S-STRSLAM-	Ladders, ladder handrails, safety guard, grab bars	0, 2	0.25	G/3	G/2
Reinforcing							
40	S-REIN-RBAR	S-REINRBM-	Rebar, welded wire mesh	0, 2	0.70	W/7	W/0
Safety Barriers							
42	S-SAFE-HRAL	S-SAFEHRM-	Handrails	0	0.25	G/3	G/2
43	S-SAFE-FENC	S-SAFEFEM-	Fencing	0	0.25	G/3	G/2
Grade Lines							
45	S-GRDL-FNGR	S-GRDLFNM-	Finished grade	0	0.35	Y/2	Y/4
46	S-GRDL-EXGL	S-GRDLEXM-	Existing ground	3	0.25	G/3	G/2
47	S-GRDL-WATR	S-GRDLWAM-	Water surface	0	0.25	G/3	G/2
Demolition (used only in creating Existing/Demolition model files)							
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Elevations

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	S-ANNO-DIMS	S-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	S-ANNO-KEYN	S-----KEP-	Reference keynotes with associated leaders	0	0.35	Y/2 Y/4
3	S-ANNO-NPLT	S-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	S-ANNO-PATT	S-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	S-ANNO-NOTE	S-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	S-ANNO-SYMB	S-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	S-ANNO-TEXT	S-----TEP-	Miscellaneous text and callouts with associated leaders	0	0.35	Y/2 Y/4
NA	S-ANNO-REFR	S-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Beams						
11	S-BEAM-CNTR	S-BEAMCNM-	Beam centerlines	7	0.18	B/5 B/1
12	S-BEAM-PRIM	S-BEAMPRM-	Primary beams/girders outlines	0, 2	0.50	C/4 C/7
13	S-BEAM-SECD	S-BEAMSCM-	Secondary beams/girders outlines	0, 2	0.35	M/6 M/5
Joints						
33	S-JOIN-CNST	S-JOINCNM-	Construction joints	0	0.25	G/3 G/2
34	S-JOIN-CTRL	S-JOINCTM-	Control/expansion joints	0	0.25	R/1 R/3
Miscellaneous Supports						
35	S-SPPT-MISC	S-SPPTMIM-	Miscellaneous fasteners, anchor bolts, supports	0, 2	0.25	G/3 G/2
36	S-SPPT-SHPS	S-SPPTSHM-	Miscellaneous shapes, plates	0, 2	0.25	G/3 G/2
Walls						
43	S-WALL-OTLN	S-WALLOTM-	Wall outline	0, 2	0.35	Y/2 Y/4
45	S-WALL-VBAR	S-WALLVBM-	Vertical/primary reinforcement	0, 2	0.50	C/4 C/7
46	S-WALL-HBAR	S-WALLHBM-	Horizontal/secondary reinforcement	0, 2	0.50	C/4 C/7
49	S-WALL-OPEN	S-WALLOPM-	Openings and penetrations	0, 2	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	S-ANNO-DIMS	S----DIP-	Witness/extension lines, dimension terminators, dimension text, welding symbols	0	V	V	V
2	S-ANNO-KEYN	S----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	S-ANNO-NPLT	S----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	S-ANNO-PATT	S----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	S-ANNO-NOTE	S----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	S-ANNO-SYMB	S----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6	M/5
7	S-ANNO-TEXT	S----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	S-ANNO-REFR	S----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Section Information							
9	S-SECT-GENF	S-SECTGEM-	General features (miscellaneous items)	0, 2	0.35	M/6	M/5
10	S-SECT-CMUW	S-SECTCMM-	CMU outline (no patterning)	0, 2	0.35	Y/2	Y/4
11	S-SECT-CNTR	S-SECTCNM-	Centerlines	7	0.18	B/5	B/1
12	S-SECT-PRIM	S-SECTPRM-	Primary beams/girders outlines	0, 2	0.50	C/4	C/7
15	S-SECT-CONC	S-SECTCOM-	Concrete outline (no patterning)	0, 2	0.35	M/6	M/5
20	S-SECT-WOOD	S-SECTWOM-	Wood outline (no patterning)	0, 2	0.35	Y/2	Y/4
33	S-SECT-JOIN	S-SECTJOM-	Joint materials (e.g., felt), vapor barrier, other	0, 2	0.25	R/1	R/3
34	S-SECT-STLS	S-SECTSTM-	Wide flange shapes, plates, open web joists, decking	0, 2	0.25	G/3	G/2
35	S-SECT-MISC	S-SECTMIM-	Miscellaneous fasteners, anchor bolts, supports	0, 2	0.25	G/3	G/2
36	S-SECT-SHPS	S-SECTSHM-	Miscellaneous shapes, plates	0, 2	0.25	G/3	G/2
40	S-SECT-RBAR	S-SECTRBM-	Rebar, welded wire mesh	0, 2, WWFBRC	0.70	W/7	W/0
45	S-SECT-FNGR	S-SECTFNM-	Finished grade	0	0.35	Y/2	Y/4

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	S-ANNO-DIMS	S-----DIP-	Witness/extension lines, dimension terminators, dimension text, welding symbols	0	V	V	V
2	S-ANNO-KEYN	S-----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	S-ANNO-NPLT	S-----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	S-ANNO-PATT	S-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	S-ANNO-NOTE	S-----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	S-ANNO-SYMB	S-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6	M/5
7	S-ANNO-TEXT	S-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	S-ANNO-REFR	S-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Detail Information							
11	S-DETL-GRPH	S-DETLGRM-	Graphics, gridlines, non-text items	V	V	V	V
12	S-DETL-METR	S-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2	Y/4
13	S-DETL-INPD	S-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2	Y/4
Demolition							
56	S-STAT-DEMO-PHS1	S-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	S-STAT-DEMO-PHS2	S-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	S-STAT-DEMO-PHS3	S-----M-D----3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Floor Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Floor Information						
8	A-FLOR-IDEN	A-FLORIDM-	Room name, space identification text	0	0.25	G/3 G/2
9	A-FLOR-NUMB	A-FLORNUM-	Room/space identification number and symbol	0	0.25	G/3 G/2
13	A-FLOR-LEVL	A-FLORLEM-	Level changes, shafts, ramps, pits, breaks in construction, and depressions	0	0.35	M/6 M/5
15	A-FLOR-OTLN	A-FLOROTM-	Floor outline/perimeter/building footprint	0	0.35	M/6 M/5
16	A-FLOR-PATT	A-FLORPAM-	Paving, tile, carpet patterns	0	0.18	Gr/8 Gr/9
17	A-FLOR-RAIS	A-FLORRAM-	Access (raised) flooring	0	0.25	G/3 G/2
18	A-FLOR-OTLN-RPRM	A-FLORORM-	Room perimeter shape (Interior walls)	0	0.35	Y/2 Y/4
19	A-FLOR-SIGN	A-FLORSIM-	Signage	0	0.25	R/1 R/3
20	A-FLOR-SPCL	A-FLORSPM-	Architectural specialties (e.g., toilet room accessories, display cases)	0	0.25	G/3 G/2
Columns						
22	A-COLS-ENCL	A-COLSENFM-	Column enclosures/fire protection	0	0.50	C/4 C/7
Walls						
23	A-WALL-CAVI	A-WALLCAM-	Cavity wall lines	0	0.25	R/1 R/3
24	A-WALL-CNTR	A-WALLCNM-	Wall centerlines	7	0.18	B/5 B/1
25	A-WALL-CWMG	A-WALLCWM-	Curtain wall mullions and glass	0	0.25	R/1 R/3
26	A-WALL-FULL-EXTR	A-WALLFEM-	Exterior full height walls	0	0.35	Y/2 Y/4
27	A-WALL-FIRE	A-WALLFIM-	Fire wall designators (patterning)	0	0.35	Y/2 Y/4
28	A-WALL-IDEN	A-WALLIDM-	Wall identification/type text or tags	0	0.25	G/3 G/2
29	A-WALL-FULL-INTR	A-WALLFNM-	Interior full height walls	0	0.25	G/3 G/2
30	A-WALL-MOVE	A-WALLMOM-	Moveable walls/partitions	0	0.18	B/5 B/1
31	A-WALL-PATT	A-WALLPAM-	Wall insulation, hatching, and fill	0	0.18	Gr/8 Gr/9
32	A-WALL-PRHT	A-WALLPRM-	Partial height walls (do not appear on Reflected Ceiling Plan)	0	0.25	R/1 R/3
33	A-WALL-SPCL	A-WALLSPM-	Wall-hung/attached specialties (e.g., fixtures, grab bars (incl. handicap), telephone booths)	0	0.25	R/1 R/3
Openings						
34	A-GLAZ-SILL	A-GLAZSIM-	Window sills	0	0.18	B/5 B/1
35	A-WALL-HEAD	A-WALLHEM-	Door and window headers	0	0.25	R/1 R/3
36	A-WALL-JAMB	A-WALLJAM-	Door and window jambs	0	0.25	R/1 R/3
Doors						
37	A-DOOR-FULL	A-DOORFUM-	Full height (to ceiling) door: swing and leaf	0	0.25	G/3 G/2
38	A-DOOR-IDEN	A-DOORIDM-	Door number and symbol, hardware group, etc.	0	0.25	G/3 G/2
39	A-DOOR-PRHT	A-DOORPRM-	Partial height door: swing and leaf	0	0.35	M/6 M/5
40	A-DOOR-SYMB	A-DOORSYM-	Miscellaneous door symbols (e.g., overhead, bifold, pocket, etc.)	0	0.25	R/1 R/3
Windows						
41	A-GLAZ-FULL	A-GLAZFUM-	Full height glazed walls and partitions (see A-WALL-CWMG for curtain walls)	0	0.25	R/1 R/3
42	A-GLAZ-IDEN	A-GLAZIDM-	Window number and symbol	0	0.25	G/3 G/2
43	A-GLAZ-PRHT	A-GLAZPRM-	Windows and partial height glazed partitions	0	0.25	R/1 R/3
Plumbing Fixtures						
44	A-FLOR-FIXT	A-FLORFXM-	Plumbing fixtures	0	0.25	201 29
45	A-FLOR-TPTN	A-FLORTPM-	Toilet partitions	0	0.25	R/1 R/3
Elevators						
46	A-FLOR-EVTR	A-FLOREVM-	Elevator cars and equipment	0	0.35	Y/2 Y/4
Stairs						
47	A-FLOR-STRS	A-FLORSTM-	Stair risers/treads, escalators, ladders	0	0.35	Y/2 Y/4
Railings						
48	A-FLOR-HRAL	A-FLORHRM-	Stair and balcony handrails, guard rail	0	0.25	R/1 R/3

Discipline: Architectural**Model File Type: Floor Plan**

Woodwork				0	0.25	G/3	G/2
49	A-FLOR-CASE	A-FLORCAM-	Casework (manufactured cabinets)	0	0.25	G/3	G/2
50	A-FLOR-WDWK	A-FLORWDM-	Architectural woodwork (field built cabinets and counters)	0	0.25	G/3	G/2
Ceiling Penetrations							
51	A-FLOR-OVHD	A-FLOROVHM-	Overhead items (skylights, overhangs etc.)	2	0.18	Gr/8	Gr/9
Demolition (used only in creating Existing/Demolition model files)							
56	A-STAT-DEMO-PHS1	A-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	A-STAT-DEMO-PHS2	A-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	A-STAT-DEMO-PHS3	A-----M-D----3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Reflected Ceiling Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Ceiling Information						
10	A-CLNG-ACCS	A-CLNGACM-	Access panels	0	0.35	M/6 M/5
12	A-CLNG-CTLJ	A-CLNGCJM-	Ceiling control joints	0	0.35	Y/2 Y/4
13	A-CLNG-GRID	A-CLNGGRM-	Ceiling grid	0	0.25	R/1 R/3
14	A-CLNG-OPEN	A-CLNGOPM-	Openings, ceiling/roof penetrations (see also A-FLOR-OVHD in Model File Type: Floor Plan)	0	0.18	Gr/8 Gr/9
15	A-CLNG-PATT	A-CLNGPAM-	Ceiling patterns	0	0.18	Gr/8 Gr/9
16	A-CLNG-TEES	A-CLNGTEM-	Main tees	0	0.18	B/5 B/1
17	A-CLNG-SUSP	A-CLNGSUM-	Suspended elements, ceiling mounted specialties (e.g., clocks, fans, etc.)	0	0.18	B/5 B/1
Lights						
21	A-LITE-CLNG	A-LITECLM-	Specialty ceiling lights not shown on Electrical Lighting Pla	0	0.50	C/4 C/7
Demolition (used only in creating Existing/Demolition model files)						
56	A-STAT-DEMO-PHS1	A-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	A-STAT-DEMO-PHS2	A-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	A-STAT-DEMO-PHS3	A-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Roof Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching (see also A-ROOF-PATT)	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Roof Information						
11	A-ROOF-CRTS	A-ROOFCRM-	Crickets flow arrows flow info	0	0.25	R/1 R/3
12	A-ROOF-RFDR	A-ROOFRDM-	Roof drains	0	0.25	R/1 R/3
13	A-ROOF-GUTR	A-ROOFGUM-	Roof internal gutters	0	0.18	Gr/8 Gr/9
14	A-ROOF-EXPJ	A-ROOFEXM-	Expansion joints	0	0.18	B/5 B/1
15	A-ROOF-HRAL	A-ROOFHRM-	Stair handrails, nosings, guard rails	0	0.18	B/5 B/1
16	A-ROOF-LEVL	A-ROFFLEM-	Level changes	0	0.18	B/5 B/1
17	A-ROOF-OTLN	A-ROOFOTM-	Roof perimeter/edge, roof geometry	0	0.35	M/6 M/5
18	A-ROOF-PATT	A-ROOFPAM-	Roof surface patterns, hatching	0	0.18	Gr/8 Gr/9
19	A-ROOF-SPCL	A-ROOFSPM-	Roof specialties, accessories, access hatches, dormers	0	0.25	G/3 G/2
20	A-ROOF-STRS	A-ROOFSTM-	Stair risers/treads, ladders	0	0.18	B/5 B/1
21	A-ROOF-WALK	A-ROOFWAM-	Roof walkways	0	0.25	G/3 G/2
22	A-ROOF-WALL	A-ROOFWLM-	Parapet walls and wall caps	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	A-STAT-DEMO-PHS1	A-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	A-STAT-DEMO-PHS2	A-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	A-STAT-DEMO-PHS3	A-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Equipment Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Equipment						
11	A-EQPM-ACCS	A-EQPMACM-	Equipment access	0	0.35	M/6 M/5
12	A-EQPM-OVHD	A-EQPMOVVM-	Overhead, ceiling mounted, or suspended equipment	0	0.35	M/6 M/5
13	A-EQPM-FIXD	A-EQPMFIM-	Fixed equipment	0	0.50	C/4 C/7
14	A-EQPM-IDEN	A-EQPMIDM-	Equipment identification numbers	0	0.35	M/6 M/5
15	A-EQPM-MOVE	A-EQPMOM-	Moveable equipment	0	0.35	M/6 M/5
16	A-EQPM-NICN	A-EQPMNCM-	Not in contract equipment	3	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	A-STAT-DEMO-PHS1	A-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	A-STAT-DEMO-PHS2	A-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	A-STAT-DEMO-PHS3	A-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Area Calculations/Occupancy Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Area Information							
9	A-AREA-IDEN	A-AREAIMD-	Room numbers, tenant identifications, area calculations	0	0.35	Y/2	Y/4
10	A-AREA-LINE	A-AREALIM-	Architectural area calculation boundary lines	0	0.50	C/4	C/7
11	A-AREA-OCCP	A-AREAOCM-	Occupant or employee names	0	0.35	Y/2	Y/4
12	A-AREA-PATT	A-AREAPAM-	Area cross hatching	0	0.18	Gr/8	Gr/9

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Elevations (Exterior and Interior)

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	A-ANNO-REFR	A----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Elevations						
37	A-ELEV-CASE	A-ELEVCAM-	Wall-mounted casework	0	0.25	G/3 G/2
38	A-ELEV-FIXT	A-ELEVFIM-	Miscellaneous fixtures	0	0.35	Y/2 Y/4
39	A-ELEV-FNSH	A-ELEVFNM-	Finishes, woodwork, trim	0	0.25	G/3 G/2
40	A-ELEV-IDEN	A-ELEVIDM-	Component identification numbers	0	0.35	Y/2 Y/4
41	A-ELEV-OTLN	A-ELEVOTM-	Building outlines	0	0.35	M/6 M/5
42	A-ELEV-PATT	A-ELEVPM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
43	A-ELEV-PFIX	A-ELEVPFM-	Plumbing fixtures	0	0.35	M/6 M/5
44	A-ELEV-SIGN	A-ELEVSM-	Signage	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	A-STAT-DEMO-PHS1	A-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	A-STAT-DEMO-PHS2	A-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	A-STAT-DEMO-PHS3	A-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	A-ANNO-DIMS	A-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	A-ANNO-KEYN	A-----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	A-ANNO-NPLT	A-----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	A-ANNO-PATT	A-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	A-ANNO-NOTE	A-----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	A-ANNO-SYMB	A-----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	A-ANNO-TEXT	A-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	A-ANNO-REFR	A-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Sections							
45	A-SECT-IDEN	A-SECTIDM-	Component identification numbers	0	0.35	Y/2	Y/4
46	A-SECT-MBND	A-SECTMBM-	Material beyond section cut	0	0.18	B/5	B/1
47	A-SECT-MCUT	A-SECTMCM-	Material cut by section	V	V	V	V
48	A-SECT-PATT	A-SECTPAM-	Textures and hatch patterns	0	0.18	Gr/8	Gr/9
Demolition (used only in creating Existing/Demolition model files)							
56	A-STAT-DEMO-PHS1	A-----M-D---1	Demolition - phase 1	0	0.50	203	45
57	A-STAT-DEMO-PHS2	A-----M-D---2	Demolition - phase 2	0	0.50	83	42
58	A-STAT-DEMO-PHS3	A-----M-D---3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	A-ANNO-DIMS	A-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	A-ANNO-KEYN	A----KEP-	Reference keynotes with associated leaders	0	V	V
3	A-ANNO-NPLT	A----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	A-ANNO-PATT	A----PAP-	Miscellaneous patterning	0	0.18	Gr/8 Gr/9
5	A-ANNO-NOTE	A----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	A-ANNO-SYMB	A----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	A-ANNO-TEXT	A----TEP-	Detail title text, text and associated leaders, notes	V	V	V
Detail Information						
11	A-DETL-GRPH	A-DETLGRM-	Graphics, gridlines, non-text items	V	V	V
12	A-DETL-METR	A-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	A-DETL-INPD	A-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
Demolition						
56	A-STAT-DEMO-PHS1	A-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	A-STAT-DEMO-PHS2	A-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	A-STAT-DEMO-PHS3	A-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Model File Type: Furniture Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	I-ANNO-DIMS	I----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	I-ANNO-KEYN	I----KEP-	Reference keynotes with associated leaders	0	V	V
3	I-ANNO-NPLT	I----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	I-ANNO-PATT	I----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	I-ANNO-NOTE	I----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	I-ANNO-SYMB	I----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	I-ANNO-TEXT	I----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	I-ANNO-REFR	I----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Equipment						
11	I-EQPM-ACCS	I-EQPMACM-	Equipment access	2	0.18	Gr/8 Gr/9
12	I-EQPM-CHLD	I-EQPMCHM-	Child development (play toys, teaching rugs, play forms)	0	0.35	Y/2 Y/4
13	I-EQPM-OVHD	I-EQPMOVM-	Overhead, ceiling mounted, and suspended equipment	0	0.25	G/3 G/2
14	I-EQPM-COPY	I-EQPMCOM-	Copiers, fax machines, office equipment	0	0.35	Y/2 Y/4
15	I-EQPM-FIXD	I-EQPMFIM-	Fixed equipment	0	0.18	B/5 B/1
16	I-EQPM-IDEN	I-EQPMIDM-	Equipment identification numbers	0	0.25	R/1 R/3
17	I-EQPM-MOVE	I-EQPMOMM-	Moveable equipment	2	0.18	B/5 B/1
18	I-EQPM-NICN	I-EQPMNIM-	Not in contract equipment	1	0.18	Gr/8 Gr/9
19	I-EQPM-STOR	I-EQPMSTM-	Storage equipment	0	0.35	Y/2 Y/4
20	I-EQPM-MEDI	I-FURNMEM-	Medical (exam beds, dental chairs, etc.)	0	0.35	Y/2 Y/4
Furnishings						
25	I-FURN-ACCS	I-FURNACM-	Accessories (vestibule matts, partitions, draperies, clocks, trash cans, lecturns lamps, etc.)	0	0.25	R/1 R/3
26	I-FURN-ADPC	I-FURNADM-	Automated Data Processing Components	0	0.35	Y/2 Y/4
27	I-FURN-ARTW	I-FURNARM-	Artwork	0	0.35	Y/2 Y/4
29	I-FURN-FLOR	I-FURNFLM-	Flooring (carpet, rugs, etc.)	0	0.35	Y/2 Y/4
30	I-FURN-FREE	I-FURNFRM-	Free-standing furnishings (desks, beds, tables, dressers, credenzas, casegoods)	0	0.35	M/6 M/5
31	I-FURN-IDEN	I-FURNIDM-	Furniture code identification	0	0.25	G/3 G/2
34	I-FURN-PLNT	I-FURNPLM-	Plants	0	0.25	R/1 R/3
35	I-FURN-SEAT	I-FURNSEM-	Chairs, sofas, etc.	0	0.35	Y/2 Y/4
36	I-FURN-STOR	I-FURNSTM-	File cabinets, high density storage, shelving, storage cabinets	0	0.35	Y/2 Y/4
Modules						
40	I-FURN-GRID	I-FURNGRM-	Planning grid/modular outline	0	0.50	C/4 C/7
Demolition (used only in creating Existing/Demolition model files)						
56	I-STAT-DEMO-PHS1	I----M-D---1	Demolition - phase 1	0	0.50	203 45
57	I-STAT-DEMO-PHS2	I----M-D---2	Demolition - phase 2	0	0.50	83 42
58	I-STAT-DEMO-PHS3	I----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Model File Type: System Furniture Plan/Workstation Typical

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	I-ANNO-DIMS	I----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	I-ANNO-KEYN	I----KEP-	Reference keynotes with associated leaders	0	V	V
3	I-ANNO-NPLT	I----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	I-ANNO-PATT	I----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	I-ANNO-NOTE	I----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	I-ANNO-SYMB	I----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	I-ANNO-TEXT	I----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	I-ANNO-REFR	I----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Systems Furniture						
11	I-SYST-FURN	I-SYSTFUM-	Furniture	0	0.35	Y/2 Y/4
12	I-SYST-IDEN	I-SYSTIDM-	Code identification	0	0.25	R/1 R/3
13	I-SYST-LITE	I-SYSTLIM-	Lighting components	0	0.50	C/4 C/7
14	I-SYST-PATT	I-SYSTPAM-	Patterns	0	0.18	Gr/8 Gr/9
15	I-SYST-PNLS	I-SYSTPNM-	Panels	0	0.35	Y/2 Y/4
16	I-SYST-POWR	I-SYSTPOM-	Power, communication components	0	0.50	C/4 C/7
17	I-SYST-STOR	I-SYSTSTM-	Storage components	0	0.35	Y/2 Y/4
18	I-SYST-WALL	I-SYSTWAM-	Systems furniture partition walls	0	0.35	Y/2 Y/4
19	I-SYST-WKSF	I-SYSTWKM-	Work surface components	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	I-STAT-DEMO-PHS1	I-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	I-STAT-DEMO-PHS2	I-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	I-STAT-DEMO-PHS3	I-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Model File Type: Signage Placement Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	I-ANNO-DIMS	I----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	I-ANNO-KEYN	I----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	I-ANNO-NPLT	I----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	I-ANNO-PATT	I----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	I-ANNO-NOTE	I----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	I-ANNO-SYMB	I----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	I-ANNO-TEXT	I----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	I-ANNO-REFR	I----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Signage							
46	I-FLOR-SIGN	I-FLORSIM-	Signage	0	0.35	M/6	M/5
Demolition (used only in creating Existing/Demolition model files)							
56	I-STAT-DEMO-PHS1	I-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	I-STAT-DEMO-PHS2	I-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	I-STAT-DEMO-PHS3	I-----M-D----3	Demolition - phase 3	0	0.50	163	41

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Model File Type: Elevations

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	I-ANNO-DIMS	I----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	I-ANNO-KEYN	I----KEP-	Reference keynotes with associated leaders	0	V	V
3	I-ANNO-NPLT	I----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	I-ANNO-PATT	I----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	I-ANNO-NOTE	I----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	I-ANNO-SYMB	I----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	I-ANNO-TEXT	I----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	I-ANNO-REFR	I----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Elevations						
37	I-ELEV-CASE	I-ELEVCAM-	Wall mounted casework	0	0.35	Y/2 Y/4
38	I-ELEV-FIXT	I-ELEVFIM-	Miscellaneous fixtures	0	0.25	G/3 G/2
39	I-ELEV-FNSH	I-ELEVFNM-	Finishes, woodwork and trim	0	0.35	Y/2 Y/4
40	I-ELEV-IDEN	I-ELEVIDM-	Component identification numbers	0	0.18	B/5 B/1
42	I-ELEV-PATT	I-ELEVPM-	Textures and hatch patterns	0	0.25	R/1 R/3
43	I-ELEV-PFIX	I-ELEVPFM-	Plumbing fixtures in elevation	0	0.25	R/1 R/3
44	I-ELEV-SIGN	I-ELEVSIM-	Signage	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	I-STAT-DEMO-PHS1	I-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	I-STAT-DEMO-PHS2	I-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	I-STAT-DEMO-PHS3	I-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	I-ANNO-DIMS	I----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	I-ANNO-KEYN	I----KEP-	Reference keynotes with associated leaders	0	V	V V
3	I-ANNO-NPLT	I----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	I-ANNO-PATT	I----PAP-	Miscellaneous patterning	0	0.18	Gr/8 Gr/9
5	I-ANNO-NOTE	I----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	I-ANNO-SYMB	I----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	I-ANNO-TEXT	I----TEP-	Detail title text, text and associated leaders, notes	0	V	V V
Detail Information						
11	I-DETL-GRPH	I-DETLGRM-	Graphics, gridlines, non-text items	V	V	V V
12	I-DETL-METR	I-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	I-DETL-INPD	I-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
Demolition						
56	I-STAT-DEMO-PHS1	I-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	I-STAT-DEMO-PHS2	I-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	I-STAT-DEMO-PHS3	I-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Fire Protection

Model File Type: Life Safety Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	F-ANNO-DIMS	F----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	F-ANNO-KEYN	F----KEP-	Reference keynotes with associated leaders	0	V	V
3	F-ANNO-NPLT	F----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	F-ANNO-PATT	F----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	F-ANNO-NOTE	F----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	F-ANNO-SYMB	F----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	F-ANNO-TEXT	F----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	F-ANNO-REFR	F----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Floor Information						
8	F-FLOR-IDEN	F-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	F-FLOR-NUMB	F-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Fire Protection/Suppression Equipment						
11	F-PROT-CABN	F-PROTCAM-	Fire hose cabinets	0	0.35	Y/2 Y/4
12	F-PROT-EXTN	F-PROTEXM-	Fire extinguishers and fire extinguisher cabinets	0	0.35	Y/2 Y/4
13	F-PROT-HOSE	F-PROTHOM-	Fire hoses	0	0.35	Y/2 Y/4
Fire Ratings						
14	F-RATE-WALL	F-RATEWAM-	Wall fire ratings	0	0.50	C/4 C/7
15	F-RATE-DOOR	F-RATEDOM-	Door fire ratings	0	0.50	C/4 C/7
Means of Egress Lighting						
19	F-LITE-EMER	F-LITEEMM-	Emergency fixtures	0	0.50	23 46
20	F-LITE-EXIT	F-LITEEXM-	Exit fixtures	0	0.50	203 45
Egress Requirements						
22	F-LSFT-EGRE	F-LSFTEGM-	Egress requirements designator	0	0.35	M/6 M/5
23	F-LSFT-TRVL	F-LSFTTRM-	Maximum travel distances	0	0.35	M/6 M/5
24	F-LSFT-OCCP	F-LSFTOCM-	Occupant load for egress capacity	0	0.35	M/6 M/5
Control Panels						
26	F-CTRL-PANL	F-CTRLPAM-	Control panels	0	0.50	23 46
Fire Alarm/Detection Equipment						
31	F-ALRM-MANL	F-ALRMMAM-	Manual fire alarm pull stations	0	0.50	23 46
Smoke/Pressurization Control						
38	F-SMOK-DAMP	F-SMOKDAM-	Dampers	0	0.35	22 22
Demolition (used only in creating Existing/Demolition model files)						
56	F-STAT-DEMO-PHS1	F-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	F-STAT-DEMO-PHS2	F-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	F-STAT-DEMO-PHS3	F-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Fire Protection

Model File Type: Fire Suppression Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	F-ANNO-DIMS	F----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	F-ANNO-KEYN	F----KEP	Reference keynotes with associated leaders	0	V	V V
3	F-ANNO-NPLT	F----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	F-ANNO-PATT	F----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	F-ANNO-NOTE	F----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	F-ANNO-SYMB	F----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	F-ANNO-TEXT	F----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	F-ANNO-REFR	F----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	F-FLOR-IDEN	F-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	F-FLOR-NUMB	F-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
CO2 Sprinkler System						
11	F-CO2S-EQPM	F-CO2SEQM-	Equipment	0	0.35	M/6 M/5
12	F-CO2S-PIPE	F-CO2SPIM-	CO2 piping or CO2 discharge nozzle piping	0	0.35	M/6 M/5
Aqueous Film Forming Foam System						
14	F-AFFF-EQPM	F-AFFFEQM-	Equipment	0	0.35	82 18
15	F-AFFF-PIPE	F-AFFFPIM-	Piping	0	0.35	82 18
Halon System						
17	F-HALN-EQPM	F-HALNEQM-	Halon equipment	0	0.35	22 22
18	F-HALN-PIPE	F-HALNPIM-	Halon piping	0	0.35	22 22
Inert Gas						
20	F-IGAS-EQPM	F-IGASEQM-	Inert gas equipment	0	0.35	162 33
21	F-IGAS-PIPE	F-IGASPIM-	Inert gas piping	0	0.35	162 33
Sprinkler System						
23	F-SPRN-CLHD	F-SPRNCLM-	Sprinkler - ceiling heads	0	0.35	122 23
24	F-SPRN-OTHD	F-SPRNNOTM-	Sprinkler - other heads	0	0.35	122 23
25	F-SPRN-PIPE	F-SPRNPIM-	Sprinkler piping	SPRINK	0.50	C/4 C/7
26	F-SPRN-STAN	F-SPRNSTM-	Standpipe system	0	0.35	122 23
Water Supply and Distribution						
31	F-WATR-PIPE	F-WATRPIM-	Piping	FIRE	0.50	C/4 C/7
32	F-WATR-CONN	F-WATRCOM-	Fire department connections	0	0.35	122 23
33	F-WATR-HYDR	F-WATRHYM-	Hydrants	0	0.35	122 23
34	F-WATR-PUMP	F-WATRPUM-	Fire pumps	0	0.35	122 23
Demolition (used only in creating Existing/Demolition model files)						
56	F-STAT-DEMO-PHS1	F-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	F-STAT-DEMO-PHS2	F-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	F-STAT-DEMO-PHS3	F-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Fire Protection

Model File Type: Fire Alarm/Detection Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	F-ANNO-DIMS	F----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	F-ANNO-KEYN	F----KEP	Reference keynotes with associated leaders	0	V	V V
3	F-ANNO-NPLT	F----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	F-ANNO-PATT	F----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	F-ANNO-NOTE	F----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	F-ANNO-SYMB	F----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	F-ANNO-TEXT	F----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	F-ANNO-REFR	F----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	F-FLOR-IDEN	F-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	F-FLOR-NUMB	F-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Control Panels						
26	F-CTRL-PANL	F-CTRLPAM-	Control panels	0	0.50	23 46
Fire Alarm/Detection Equipment						
31	F-ALRM-MANL	F-ALRMMAM-	Manual fire alarm pull stations	0	0.50	23 46
33	F-ALRM-DTCT	F-ALRMDTM-	Smoke/heat/other detectors	0	0.50	23 46
34	F-ALRM-INDC	F-ALRMINM-	Indicating appliances	0	0.50	83 42
Smoke/Pressurization Control						
38	F-SMOK-DAMP	F-SMOKDAM-	Dampers	0	0.35	22 22
Demolition (used only in creating Existing/Demolition model files)						
56	F-STAT-DEMO-PHS1	F-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	F-STAT-DEMO-PHS2	F-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	F-STAT-DEMO-PHS3	F-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Fire Protection

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphic0		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	F-ANNO-DIMS	F-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	F-ANNO-KEYN	F-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	F-ANNO-NPLT	F-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	F-ANNO-PATT	F-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	F-ANNO-NOTE	F-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	F-ANNO-SYMB	F-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	F-ANNO-TEXT	F-----TEP-	Detail title text, text and associated leaders, notes	V	V V	V
Detail Information						
11	F-DETL-GRPH	F-DETLGRM-	Graphics, gridlines, non-text items	V	V	V
12	F-DETL-METR	F-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	F-DETL-INPD	F-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	F-STAT-DEMO-PHS1	F-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	F-STAT-DEMO-PHS2	F-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	F-STAT-DEMO-PHS3	F-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies

Discipline: Plumbing

Model File Type: Piping Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	P-ANNO-DIMS	P----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	P-ANNO-KEYN	P----KEP-	Reference keynotes with associated leaders	0	V	V V
3	P-ANNO-NPLT	P----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	P-ANNO-PATT	P----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	P-ANNO-NOTE	P----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	P-ANNO-SYMB	P----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	P-ANNO-TEXT	P----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	P-ANNO-REFR	P----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	P-FLOR-IDEN	P-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	P-FLOR-NUMB	P-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Domestic Water Piping System						
10	P-DOMW-ACCS	P-DOMWACM-	Equipment access doors	0	0.35	82 18
11	P-DOMW-CPIP	P-DOMWCPM-	Domestic cold water piping	CLDWTR	0.50	123 31
12	P-DOMW-EQPM	P-DOMWEQM-	Hot and cold water equipment	0	0.70	7 0
13	P-DOMW-FPIP	P-DOMWFPM-	Domestic filtered water piping	0	0.50	83 42
14	P-DOMW-HPIP	P-DOMWHPM-	Domestic hot water piping	HWTR, HWTRR	0.50	113 16
15	P-DOMW-RISR	P-DOMWRIM-	Domestic hot and cold water risers	2	0.25	G/3 G/2
Sanitary Drainage Piping						
20	P-SANR-COND	P-SANRCOM-	Condensate piping	0	0.50	83 42
22	P-SANR-EQPM	P-SANREQM-	Equipment (e.g., sand/oil/water separators)	0	0.70	204 37
23	P-SANR-FLDR	P-SANRFLM-	Floor drains, sinks, and cleanouts	0	0.35	M/6 M/5
24	P-SANR-PIPE	P-SANRPIM-	Piping	SSWAF	0.50	203 45
25	P-SANR-RISR	P-SANRRIM-	Sanitary risers	2	0.50	203 45
26	P-SANR-VENT	P-SANRVEM-	Vent piping	VENT	0.50	203 45
Storm Drainage Piping						
31	P-STRM-PIPE	P-STRMPIM-	Storm drain piping	STRAF	0.50	163 41
32	P-STRM-RFDR	P-STRMRFM-	Roof drains	0, ROOFDN	0.50	163 41
33	P-STRM-RISR	P-STRMRIM-	Storm drain risers	2	0.50	163 41
Compressed Air						
36	P-CMPA-EQPM	P-CMPAEQM-	Equipment	0	0.70	84 34
37	P-CMPA-PIPE	P-CMPAPIM-	Piping	CMPAIR	0.50	83 42
Fuel Systems						
38	P-FUEL-EQPM	P-FUELEQM-	Equipment	0	0.70	24 38
39	P-FUEL-NGAS	P-FUELNGM-	Natural gas piping	NTGASN	0.50	23 46
40	P-FUEL-FGAS	P-FUELFGM-	Fuel gas piping	LIQPET	0.50	23 46
41	P-FUEL-FOIL	P-FUELFOM-	Fuel oil piping	FUELOR, FUELOS, FUELOV	0.50	23 46
Medical/Dental Piping						
42	P-MDGS-EQPM	P-MDGSEQM-	Equipment	0	0.70	24 38
43	P-MDGS-PIPE	P-MDGSPIM-	Piping	OXYGEN, NITROX, VACAIR	0.50	23 46
Laboratory Piping						
45	P-LGAS-EQPM	P-LGASEQM-	Equipment	0	0.70	24 38
46	P-LGAS-PIPE	P-LGASPIM-	Piping	OXYGEN, NITROG, HELIUM, HYDRGN, ACIDWS, DSTWTR, DIOWTR	0.50	23 46
Demolition (used only in creating Existing/Demolition model files)						
56	P-STAT-DEMO-PHS1	P-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	P-STAT-DEMO-PHS2	P-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	P-STAT-DEMO-PHS3	P-----M-D----3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
61	P-PENE-FLOR	P-PENEFLM-	Floor penetrations	2	0.25	G/3 G/2
62	P-PENE-ROOF	P-PENEROM-	Roof penetrations	2	0.25	R/1 R/3

Note: V = Varies, NA = Not Applicable

Discipline: Plumbing

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	P-ANNO-DIMS	P----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	P-ANNO-KEYN	P----KEP-	Reference keynotes with associated leaders	0	V	V V
3	P-ANNO-NPLT	P----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	P-ANNO-PATT	P----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	P-ANNO-NOTE	P----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	P-ANNO-SYMB	P----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	P-ANNO-TEXT	P----TEP-	Detail title text, text and associated leaders, notes	V	V V	V
Detail Information						
11	P-DETL-GRPH	P-DETLGRM-	Graphics, gridlines, non-text items	V	V	V
12	P-DETL-METR	P-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	P-DETL-INPD	P-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	P-STAT-DEMO-PHS1	P-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	P-STAT-DEMO-PHS2	P-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	P-STAT-DEMO-PHS3	P-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies

Discipline: Plumbing

Model File Type: Riser Diagrams

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	P-ANNO-DIMS	P----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	P-ANNO-KEYN	P----KEP-	Reference keynotes with associated leaders	0	V	V V
3	P-ANNO-NPLT	P----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	P-ANNO-PATT	P----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	P-ANNO-NOTE	P----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	P-ANNO-SYMB	P----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	P-ANNO-TEXT	P----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	P-ANNO-REFR	P----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Diagram Information						
11	P-DIAG-GRPH	P-DIAGGRM-	Graphics, gridlines, non-text items	0, 2	V	V V
12	P-DIAG-METR	P-DIAGMEM-	Metric-specific dimensions and notes	0	0.25	R/1 R/3
13	P-DIAG-INPD	P-DIAGINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1 R/3
Other Discipline Information						
60	P-DISC-INFO	P-DISCINM-	Information and notes for other disciplines	V	V	V V

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: HVAC Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	M-ANNO-KEYN	M----KEP-	Reference keynotes with associated leaders	0	V	V
3	M-ANNO-NPLT	M----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	M-ANNO-REFR	M----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Floor Information						
8	M-FLOR-IDEN	M-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	M-FLOR-NUMB	M-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Ductwork and Equipment						
10	M-HVAC-ACCS	M-HVACACM-	Equipment access doors	0, 1, 2	0.25	G/3 G/2
11	M-HVAC-DAMP	M-HVACDAM-	Fire and smoke dampers	0	0.25	R/1 R/3
12	M-HVAC-EQPM	M-HVACEQM-	Equipment	0	0.35	Y/2 Y/4
13	M-HVAC-ROOF	M-HVACROM-	Roof mounted HVAC equipment	0	0.35	Y/2 Y/4
14	M-HVAC-RETN	M-HVACREM-	Return ductwork	V	0.50	23 46
15	M-HVAC-SUPP	M-HVACSUM-	Supply ductwork	V	0.50	C/4 C/7
16	M-HVAC-IDEN	M-HVACIDM-	Duct sizes and pressure classes	V	0.35	M/6 M/5
Diffusers, Registers, and Grilles						
17	M-HVAC-CDFF	M-HVACCDM-	Ceiling diffusers, registers, and grilles	0	0.35	12 27
18	M-HVAC-TAGS	M-HVACTAM-	Diffuser/register/grille tags and air flow arrows	0	0.35	M/6 M/5
19	M-HVAC-Wdff	M-HVACWDM-	Wall diffusers, registers, and grilles	0	0.35	Y/2 Y/4
20	M-HVAC-Fdff	M-HVACFDM-	Floor diffusers, registers, and grilles	0	0.35	162 33
Exhaust						
24	M-EXHS-DUCT	M-EXHSDUM-	Exhaust ductwork	V	0.50	83 42
Dust and Fume Collection Systems						
28	M-DUST-DUCT	M-DUSTDUM-	Dust and fume ductwork	0	0.50	203 45
Chilled Water System						
31	M-CWTR-PIPE	M-CWTRPIM-	Piping (includes fittings, valves)	CWR, CWS	0.50	163 41
Hot Water Heating System						
33	M-HWTR-PIPE	M-HWTRPIM-	Piping (includes fittings, valves)	HWR, HWS	0.50	113 16
Condensate						
34	M-COND-PIPE	M-CONDPIBM-	Condensate piping (includes fittings, valves)	CDRNAF	0.50	83 42
Condenser Water System						
36	M-CNDW-PIPE	M-CNDWPIM-	Condenser water piping	CONDWR, CONDWS	0.50	83 42
Controls						
38	M-CONT-WIRE	M-CONTWIM-	Low voltage wiring	1, 2	0.25	R/1 R/3
39	M-CONT-THER	M-CONTTHM-	Thermostats, controls, instrumentation, and sensor	0	0.25	R/1 R/3
Dual Temperature System						
41	M-DUAL-PIPE	M-DUALPIM-	Piping (includes fittings, valves)	DTR, DTS	0.50	23 46
Steam System						
43	M-STEM-PIPE	M-STEMPIM-	Steam piping	STEAM	0.50	113 16
Refrigeration System						
45	M-REFG-PIPE	M-REFGPIM-	Piping (includes fittings, valves)	REFRD, REFRL, REFRS	0.50	163 41
Energy Recovery System						
47	M-RCOV-PIPE	M-RCOVPIM-	Piping (includes fittings, valves)	0	0.50	203 45
Chemical Treatment System						
49	M-CHEM-PIPE	M-CHEMPIM-	Piping (includes fittings, valves)	0	0.50	123 31
Geothermal Heat Pump System						
51	M-GTHP-PIPE	M-GTHPPIM-	Piping (includes fittings, valves)	0	0.50	203 45

Discipline: Mechanical**Model File Type: HVAC Plan**

Demolition (used only in creating Existing/Demolition model files)				
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0
Other Discipline Information				
59	M-DISC-INFO	M-DISCINM-	Clearances and working space information	0, 1
61	M-PENE-FLOR	M-PENEFLM-	Floor penetrations	2
62	M-PENE-ROOF	M-PENEROM-	Roof penetrations	2

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Specialty Piping and Equipment

Level #	Level/Layer Naming		Level/Layer Description	Graphics				
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color#	MicroStation Line Color#	
General Information								
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V	
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V	V	
3	M-ANNO-NPLT	M----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1	
4	M-ANNO-PATT	M----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9	
5	M-ANNO-NOTE	M----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4	
6	M-ANNO-SYMB	M----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5	
7	M-ANNO-TEXT	M----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V	
NA	M-ANNO-REFR	M----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA	
Floor Information								
8	M-FLOR-IDEN	M-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3	G/2	
9	M-FLOR-NUMB	M-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3	G/2	
Brine Systems								
11	M-BRIN-EQPM	M-BRINEQM-	Brine system equipment	0	0.35	M/6	M/5	
12	M-BRIN-PIPE	M-BRINPIM-	Brine system piping	BRINER, BRINES		0.35	Y/2	Y/4
Anti-freeze								
19	M-AFRZ-PIPE	M-AFRZPIM-	Anti-freeze piping	0	0.35	82	18	
20	M-AFRZ-WAST	M-AFRZWAM-	Waste anti-freeze piping	0	0.35	82	18	
Hydraulic Systems								
22	M-HYDR-EQPM	M-HYDREQM-	Hydraulic system equipment	0	0.35	M/6	M/5	
23	M-HYDR-PIPE	M-HYDRPIM-	Hydraulic system piping	0	0.35	Y/2	Y/4	
Industrial Waste Piping								
25	M-ACID-EQPM	M-ACIDEQM-	Acid, alkaline, and oil waste equipment	0	0.35	M/6	M/5	
26	M-ACID-PIPE	M-ACIDPIM-	Acid, alkaline, and oil waste piping	ACIDWS		0.35	Y/2	Y/4
27	M-ACID-VENT	M-ACIDVEM-	Acid, alkaline, and oil waste vent piping	2	0.35	Y/2	Y/4	
Insulating (Transformer) Oil								
28	M-INSL-EQPM	M-INSLEQM-	Insulating oil equipment	0	0.35	M/6	M/5	
29	M-INSL-PIPE	M-INSLPIM-	Insulating oil piping	0	0.35	Y/2	Y/4	
Lubrication Oil								
33	M-LUBE-EQPM	M-LUBEEQM-	Lubrication oil equipment	0	0.35	M/6	M/5	
34	M-LUBE-PIPE	M-LUBEPIM-	Lubrication oil piping	0	0.35	Y/2	Y/4	
Process Piping								
40	M-PROC-EQPM	M-PROCEQM-	Equipment	0	0.35	M/6	M/5	
42	M-PROC-PIPE	M-PROCPIBM-	Process piping	0	0.35	Y/2	Y/4	
Raw Water Piping								
44	M-RWTR-EQPM	M-RWTREQM-	Raw water equipment	0	0.35	M/6	M/5	
45	M-RWTR-PIPE	M-RWTRPIM-	Raw water piping	0	0.35	Y/2	Y/4	
Demolition (used only in creating Existing/Demolition model files)								
56	M-STAT-DEMO-PHS1	M-----M-D---1	Demolition - phase 1	0	0.50	203	45	
57	M-STAT-DEMO-PHS2	M-----M-D---2	Demolition - phase 2	0	0.50	83	42	
58	M-STAT-DEMO-PHS3	M-----M-D---3	Demolition - phase 3	0	0.50	163	41	
Other Discipline Information								
59	M-DISC-INFO	M-DISCNM-	Clearances and working space information	0, 1	0.25	G/3	G/2	
61	M-PENE-FLOR	M-PENEFLM-	Floor penetrations	2	0.25	G/3	G/2	
62	M-PENE-ROOF	M-PENEROM-	Roof penetrations	2	0.25	R/1	R/3	

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: HTCW Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	M-ANNO-KEYN	M----KEP-	Reference keynotes with associated leaders	0	V	V V
3	M-ANNO-NPLT	M----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	M-ANNO-REFR	M----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Devices						
11	M-HTCW-DEVC	M-HTCWDEM-	Rigid anchors, anchor guides, rectifiers, reducers, markers, meters, pumps, regulators, tanks, and valves	0	0.35	M/6 M/5
Stations						
16	M-HTCW-PUMP	M-HTCPUM-	Pump stations	0	0.35	M/6 M/5
18	M-HTCW-STNS-IDEN	M-HTCWSIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Plants						
19	M-HTCW-CHLP	M-HTCWCPM-	Chilled water plant	0	0.35	M/6 M/5
20	M-HTCW-HTPP	M-HTCWHPM-	High temperature water plant	0	0.35	M/6 M/5
21	M-HTCW-PLNT-IDEN	M-HTCWPIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Junction Boxes						
22	M-HTCW-JBOX	M-HTCWJBM-	Junction boxes, manholes, handholes, test boxes:	0	0.25	R/1 R/3
Pits						
25	M-HTCW-PITS	M-HTCWPTM-	Valve pits/vaults, steam pits	0	0.25	G/3 G/2
Piping						
32	M-HTCW-ABND	M-HTCWABM-	Abandoned piping	2	0.35	M/6 M/5
33	M-HTCW-FLOW	M-HTCWFLM-	Flow direction arrows	0	0.25	G/3 G/2
34	M-HTCW-CHLL	M-HTCWCHM-	Main chilled water piping	0	0.35	M/6 M/5
35	M-HTCW-CHLS	M-HTCWCSM-	Chilled water service piping	0	0.25	G/3 G/2
37	M-HTCW-FTTG	M-HTCWFTM-	Caps and flanges	0	0.35	M/6 M/5
38	M-HTCW-HTPL	M-HTCWHTM-	Main high temperature piping	0	0.25	R/1 R/3
39	M-HTCW-HTPS	M-HTCWHSM-	High temperature service piping	0	0.25	G/3 G/2
40	M-HTCW-IDEN	M-HTCWIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
41	M-HTCW-LTPL	M-HTCWLTM-	Main low temperature piping	0	0.35	Y/2 Y/4
42	M-HTCW-LTPS	M-HTCWLSM-	Low temperature service piping	0	0.25	G/3 G/2
45	M-HTCW-RTRN	M-HTCWRTM-	Return for all HTCW lines	0	0.18	B/5 B/1
48	M-HTCW-STML	M-HTCWSTM-	Main steam piping	0	0.25	R/1 R/3
49	M-HTCW-STMS	M-HTCWSSM-	Steam service piping	0	0.25	G/3 G/2
Geothermal Heat Pump System						
50	M-GTHP-EQPM	M-GTHPEQM-	Equipment	0	0.35	M/6 M/5
51	M-GTHP-PIPE	M-GTHPPIM-	Piping (includes fittings, valves)	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Material Handling

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	M-ANNO-REFR	M-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Material Handling						
43	M-MATL-CRAN	M-MATLCRM-	Bridge cranes, jib cranes, and monorails	0	0.35	Y/2 Y/4
44	M-MATL-HOIS	M-MATLHOM-	Hoists and hooks	0	0.35	Y/2 Y/4
45	M-MATL-LIFT	M-MATLLIM-	Miscellaneous lifting equipment	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Machine Design

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	M-ANNO-REFR	M-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Machine Design						
11	M-MACH-BASE	M-MACHBAM-	Machinery bases	0	0.35	Y/2 Y/4
12	M-MACH-COMP	M-MACHCOM-	Miscellaneous machinery parts and components	0	0.35	Y/2 Y/4
13	M-MACH-EXST	M-MACHEXM-	Existing machinery	0	0.25	G/3 G/2
14	M-MACH-FAST	M-MACHFAM-	Fasteners, nuts, and bolts	0	0.35	Y/2 Y/4
15	M-MACH-LROT	M-MACHLRM-	Large rotating machinery (turbine and pump outlines)	0	0.35	M/6 M/5
16	M-MACH-MOTR	M-MACHMOM-	Machinery motors	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Elevations

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	M-ANNO-REFR	M-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Elevations						
38	M-ELEV-FIXT	M-ELEVFM-	Miscellaneous fixtures	0	0.35	M/6 M/5
40	M-ELEV-IDEN	M-ELEVIDM-	Component identification numbers	0	0.35	Y/2 Y/4
41	M-ELEV-OTLN	M-ELEVOTM-	Building outlines	0	0.35	M/6 M/5
42	M-ELEV-PATT	M-ELEVPM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
43	M-ELEV-PFIX	M-ELEVPFM-	Plumbing fixtures	0	0.35	M/6 M/5
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Sections

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	M-ANNO-REFR	M-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Sections						
45	M-SECT-IDEN	M-SECTIDM-	Component identification numbers	0	0.35	Y/2 Y/4
46	M-SECT-MBND	M-SECTMBM-	Material beyond section cut	V	0.18	B/5 B/1
47	M-SECT-MCUT	M-SECTMCM-	Material cut by section	0	0.50	C/4 C/7
48	M-SECT-PATT	M-SECTPAM-	Textures and hatch patterns	0	0.18	Gr/8 Gr/9
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphic0		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Reference bubbles, matchlines and breaklines	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Detail title text, text and associated leaders, notes	V	V V	V
Detail Information						
11	M-DETL-GRPH	M-DETLGRM-	Graphics, gridlines, non-text items	V	V	V
12	M-DETL-METR	M-DETLMEM-	Metric-specific dimensions and notes	0	0.25	G/3 G/2
13	M-DETL-INPD	M-DETLINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Model File Type: Control Diagrams

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	M-ANNO-DIMS	M-----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	M-ANNO-KEYN	M-----KEP-	Reference keynotes with associated leaders	0	V	V V
3	M-ANNO-NPLT	M-----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	M-ANNO-PATT	M-----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	M-ANNO-NOTE	M-----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	M-ANNO-SYMB	M-----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	M-ANNO-TEXT	M-----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	M-ANNO-REFR	M-----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Diagram Information						
11	M-DIAG-GRPH	M-DIAGGRM-	Graphics, gridlines, non-text items	V	V	V V
12	M-DIAG-METR	M-DIAGMEM-	Metric-specific dimensions and notes	0	0.25	G/3 G/2
13	M-DIAG-INPD	M-DIAGINM-	Inch-pound-specific dimensions and notes	0	0.25	R/1 R/3
Demolition (used only in creating Existing/Demolition model files)						
56	M-STAT-DEMO-PHS1	M-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	M-STAT-DEMO-PHS2	M-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	M-STAT-DEMO-PHS3	M-----M-D---3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Lighting Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/##	MicroStation Line Color/##
General Information							
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V	V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V	V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5	B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8	Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2	Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6	M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V	V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA
Floor Information							
8	E-FLOR-IDEN	E-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3	G/2
9	E-FLOR-NUMB	E-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3	G/2
Electrical Equipment							
10	E-LITE-PANL	E-LITEPAM-	Main distribution panels, switchboards, lighting panels	0	0.50	C/4	C/7
Junction Boxes							
14	E-LITE-JBOX	E-LITEJBM-	Junction boxes	0	0.50	83	42
Switches							
16	E-LITE-SWCH	E-LITESWM-	Lighting contactors, photoelectric controls, low-voltage lighting controls, etc.	0	0.50	163	41
Lighting							
18	E-LITE-CLNG	E-LITECLM-	Ceiling mounted (surface/pendant) fixtures	0	0.50	203	45
19	E-LITE-EMER	E-LITEEMM-	Emergency fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)	0	0.50	23	46
20	E-LITE-EXIT	E-LITEEXM-	Exit fixtures (outline of light (if ceiling mounted) should go on E-LITE-CLNG)	0	0.50	203	45
21	E-LITE-FLOR	E-LITEFLM-	Floor mounted fixtures (e.g., stage)	0	0.50	203	45
22	E-LITE-IDEN	E-LITEIDM-	Light fixture identifier tags	0	0.35	Y/2	Y/4
24	E-LITE-ROOF	E-LITEROM-	Roof lighting	0	0.50	203	45
26	E-LITE-SPCL	E-LITESPM-	Special fixtures	0	0.50	203	45
27	E-LITE-WALL	E-LITEWAM-	Wall mounted fixtures	0	0.50	203	45
Circuit Lines							
47	E-LITE-CIRC	E-LITECIM-	Lighting circuits (including crosslines and homeruns)	0	0.50	83	42
48	E-LITE-CIRC-NUMB	E-LITECNM-	Lighting circuit numbers (e.g., panel/circuit number, wire/conduit size)	0	0.35	Y/2	Y/4
Demolition (used only in creating Existing/Demolition model files)							
56	E-STAT-DEMO-PHS1	E-----M-D----1	Demolition - phase 1	0	0.50	203	45
57	E-STAT-DEMO-PHS2	E-----M-D----2	Demolition - phase 2	0	0.50	83	42
58	E-STAT-DEMO-PHS3	E-----M-D----3	Demolition - phase 3	0	0.50	163	41
Other Discipline Information							
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0	0.25	G/3	G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Power Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	E-FLOR-IDEN	E-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	E-FLOR-NUMB	E-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Electrical Equipment						
10	E-POWR-PANL	E-POWRPAM-	Panelboards, switchboards, MCC, unit substations	0	0.50	C/4 C/7
Junction Boxes						
14	E-POWR-JBOX	E-POWRJBM-	Junction boxes	0	0.50	83 42
Switches						
16	E-POWR-SWCH	E-POWRSWM-	Disconnect switches, motor starters, contactors, etc	0	0.50	163 41
Power						
18	E-POWR-BUSW	E-POWRBUM-	Busways and wireways	0, BUSWAY, WIREWY	0.50	203 45
19	E-POWR-CABL	E-POWRCAM-	Cable trays	0	0.50	203 45
20	E-POWR-CLNG	E-POWRCLM-	Ceiling outlets (receptacles and switches)	0	0.50	83 42
21	E-POWR-FEED	E-POWRFEM-	Feeders	0	0.50	203 45
24	E-POWR-URAC	E-POWRURM-	Underfloor raceways	3	0.50	203 45
25	E-POWR-WALL	E-POWRWAM-	Wall/floor outlets (receptacles and switches)	0	0.50	83 42
Motors/Generators						
27	E-POWR-MOTR	E-POWRMOM-	Motors and utilization equipment	0	0.50	C/4 C/7
28	E-POWR-GENR	E-POWRGEM-	Generators and auxiliary equipment	0	0.50	C/4 C/7
Circuit Lines						
47	E-POWR-CIRC	E-POWCIM-	Power circuits (including crosslines and homeruns)	V	0.50	83 42
48	E-POWR-CIRC-NUMB	E-POWRCNM-	Power circuit numbers (e.g., panel/circuit number, wire/conduit size)	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	E-STAT-DEMO-PHS1	E-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	E-STAT-DEMO-PHS2	E-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	E-STAT-DEMO-PHS3	E-----M-D---3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0	0.25	G/3 G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Special Systems Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	E-FLOR-IDEN	E-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	E-FLOR-NUMB	E-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Electrical Equipment						
10	E-SPCL-PANL	E-SPCLPAM-	Panelboards, backing boards, patch panel racks	0	0.50	C/4 C/7
Junction Boxes						
14	E-SPCL-JBOX	E-SPCLJBM-	Junction boxes	0	0.50	83 42
Bell System						
16	E-BELL-IDEN	E-BELLIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
17	E-BELL-SYMB	E-BELLSYM-	Bell system symbols	0	0.50	203 45
Central Dictation System						
18	E-DICT-IDEN	E-DICTIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
19	E-DICT-SYMB	E-DICTSYM-	Central dictation system symbols	0	0.50	203 45
Clock System						
20	E-CLOK-IDEN	E-CLOKIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
21	E-CLOK-SYMB	E-CLOKSYM-	Clock system symbols	0	0.50	203 45
Miscellaneous Alarm System						
22	E-ALRM-IDEN	E-ALRIMDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
23	E-ALRM-SYMB	E-ALRMSYM-	Miscellaneous alarm system symbols	0	0.50	203 45
Nurse Call/Paging Systems						
24	E-NURS-IDEN	E-NURSIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
25	E-NURS-SYMB	E-NURSSYM-	Nurse call/paging system symbols	0	0.50	203 45
Sound System						
26	E-SOUN-IDEN	E-SOUNIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
27	E-SOUN-SYMB	E-SOUNSYM-	Sound system symbols	0	0.50	203 45
Cable TV System						
28	E-CATV-IDEN	E-CATVIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
29	E-CATV-SYMB	E-CATVSYM-	Cable television system symbols	0, CABLTV	0.50	203 45
Closed-Circuit Television System						
30	E-CCTV-IDEN	E-CCTVIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
31	E-CCTV-SYMB	E-CCTVSYM-	Closed-circuit television system symbols	0	0.50	203 45
TV Antenna System						
32	E-TVAN-IDEN	E-TVANIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
33	E-TVAN-SYMB	E-TVANSYM-	TV antenna system symbols	0	0.50	203 45
Intercom/Public Address System						
34	E-INTC-IDEN	E-INTCIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
35	E-INTC-SYMB	E-INTCSYM-	Intercom/PA system symbols	0	0.50	203 45
Energy Monitoring Control Systems						
36	E-EMCS-IDEN	E-EMCSIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
37	E-EMCS-SYMB	E-EMCSSYM-	Energy monitoring control system symbols	0	0.50	203 45
Security System						
38	E-SERT-IDEN	E-SERTIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
39	E-SERT-ACCS	E-SERTACM-	Access control system symbols	0	0.50	23 46
40	E-SERT-UNDR	E-SERTUNM-	Buried sensors	0	0.50	23 46
41	E-SERT-CLNG	E-SERTCLM-	Ceiling mounted sensors	0	0.50	23 46
42	E-SERT-FLOR	E-SERTFLM-	Floor mounted sensors	0	0.50	23 46
43	E-SERT-WALL	E-SERTWAM-	Wall mounted sensors	0	0.50	23 46

Discipline: Electrical**Model File Type: Special Systems Plan**

Cable System						
50	E-CABL-COAX	E-COMMCOM-	Coax cable	2	0.50	83 42
51	E-CABL-FIBR	E-COMMFIM-	Fiber optics cable	FIBOPT	0.50	83 42
52	E-CABL-IDEN	E-COMMIDM-	Cable identifiers	0	0.35	Y/2 Y/4
53	E-CABL-MULT	E-COMMMUM-	Multi-conductor cable	V	0.50	83 42
54	E-CABL-TRAY	E-COMMTRM-	Cable trays and wireways	0	0.50	203 45
Demolition (used only in creating Existing/Demolition model files)						
56	E-STAT-DEMO-PHS1	E-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	E-STAT-DEMO-PHS2	E-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	E-STAT-DEMO-PHS3	E-----M-D----3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0	0.25	G/3 G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Grounding System Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Ground System						
33	E-GRND-CIRC	E-GRNDCIM-	Circuits	0	0.50	C/4 C/7
34	E-GRND-DIAG	E-GRNDDIM-	Ground system diagram	0	0.50	163 41
35	E-GRND-EQUI	E-GRNDEQM-	Equipotential ground system	0	0.50	83 42
36	E-GRND-REFR	E-GRNDREM-	Reference ground system	0	0.50	23 46
Lightning Protection System						
38	E-LTNG-COND	E-LTNGCOM-	Lightning protection conductors	0	0.50	203 45
39	E-LTNG-TERM	E-LTNGTEM-	Lightning protection terminals	0	0.50	203 45
Demolition (used only in creating Existing/Demolition model files)						
56	E-STAT-DEMO-PHS1	E-----M-D----1	Demolition - phase 1	0	0.50	203 45
57	E-STAT-DEMO-PHS2	E-----M-D----2	Demolition - phase 2	0	0.50	83 42
58	E-STAT-DEMO-PHS3	E-----M-D----3	Demolition - phase 3	0	0.50	163 41

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Electrical Utilities Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA
Primary Electrical Cables						
11	E-PRIM-OVHD	E-PRIMOVM-	Overhead electrical utility lines	EPARN	0.50	C/4 C/7
12	E-PRIM-OVHD-IDEN	E-PRIMOIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
13	E-PRIM-UNDR	E-PRIMUNM-	Underground electrical utility lines	EPUGN	0.50	C/4 C/7
14	E-PRIM-UNDR-IDEN	E-PRIMUIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Secondary Electrical Cables						
15	E-SECD-OVHD	E-SECDOVM-	Overhead electrical utility lines	ESARN	0.50	163 41
16	E-SECD-OVHD-IDEN	E-SECDOIM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
17	E-SECD-UNDR	E-SECDUNM-	Underground electrical utility lines	ESUGN	0.50	163 41
18	E-SECD-UNDR-IDEN	E-SECDUIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Transformers						
19	E-TRAN-PADM	E-TRANPAM-	Pad mounted transformers	0	0.50	23 46
20	E-TRAN-PADM-IDEN	E-TRANPDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
21	E-TRAN-POLE	E-TRANPOM-	Pole mounted transformers	0	0.50	23 46
22	E-TRAN-POLE-IDEN	E-TRANPIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Electrical Support Equipment						
23	E-ELEC-JBOX	E-ELECJBM-	Junction boxes, pull boxes, manholes, handholes, pedestals, splices	0	0.50	23 46
24	E-ELEC-DEVC	E-ELECDEM-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	0	0.50	23 46
25	E-ELEC-SWCH	E-ELECSWM-	Fuse cutouts, pole mounted switches, circuit breakers, gang operated disconnects, reclosers, cubicle switches	0	0.50	23 46
26	E-ELEC-SUBS	E-ELECSUM-	Other substation equipment	0	0.50	23 46
Lights						
31	E-LITE-EXTR	E-LITEFXM-	Exterior lights	0	0.50	203 45
32	E-LITE-EXTR-IDEN	E-LITEFIM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Utility Poles						
33	E-POLE-UTIL	E-POLEUTM-	Utility poles	0	0.50	203 45
34	E-POLE-IDEN	E-POLEUIM-	Utility pole identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
35	E-POLE-GUYS	E-POLEGYM-	Guying equipment	0	0.50	203 45
36	E-POLE-GUYS-IDEN	E-POLEGIM-	Guying equipment identifier tags, symbol modifiers, and tex	0	0.35	Y/2 Y/4
Underground Ductbanks (to be used when multiple systems are in one ductbank system)						
37	E-DUCT-MULT	E-DUCTMUM-	Ductbank	EUDUCN	0.50	83 42
38	E-DUCT-MULT-IDEN	E-DUCTMIM-	Identifier tags, symbol modifier and tex	0	0.35	Y/2 Y/4
Cathodic Protection System						
40	E-CATH-ANOD	E-CATHANM-	Sacrificial anode system	0	0.50	83 42
41	E-CATH-CURR	E-CATHCUM-	Impress current system	0	0.50	83 42
42	E-CATH-TEST	E-CATHTEM-	Test stations	0	0.50	83 42
43	E-CATH-IDEN	E-CATHIDM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Special Systems						
45	E-SPCL-TRAF	E-SPCLTRM-	Traffic signal system	0	0.50	203 45
46	E-SPCL-TRAF-IDEN	E-SPCLTIM-	Traffic signal identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
47	E-SPCL-SYST	E-SPCLSYM-	Special systems (UMCS, EMCS, CATV, etc.)	0	0.50	203 45
48	E-SPCL-IDEN	E-SPCLIDM-	Special systems (UMCS, EMCS, CATV, etc.) identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4

Discipline: Electrical**Model File Type: Electrical Utilities Plan**

Demolition (used only in creating Existing/Demolition model files)				
56	E-STAT-DEMO-PHS1	E-----M-D----1	Demolition - phase 1	0 0.50 203 45
57	E-STAT-DEMO-PHS2	E-----M-D----2	Demolition - phase 2	0 0.50 83 42
58	E-STAT-DEMO-PHS3	E-----M-D----3	Demolition - phase 3	0 0.50 163 41
Other Discipline Information				
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0 0.25 G/3 G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Exterior Communication Systems Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Communications Cables (Copper and Fiber Optic)						
11	E-COMM-OVHD	E-COMMOVM-	Overhead communications/telephone lines	COMARN	0.50	C/4 C/7
12	E-COMM-OVHD-IDEN	E-COMMOIM-	Identifier tags, symbol modifier and text	0	0.35	Y/2 Y/4
13	E-COMM-UNDR	E-COMMUNM-	Underground communications/telephone lines	COMUGN	0.50	C/4 C/7
14	E-COMM-UNDR-IDEN	E-COMMUIM-	Identifier tags, symbol modifier and tex	0	0.35	Y/2 Y/4
Communications Support Equipment						
23	E-COMM-JBOX	E-COMMJBIM-	Communication junction boxes, pull boxes, manholes, handholes, pedestals, splices	0	0.50	23 46
26	E-COMM-EQPM	E-COMMEQM-	Other communications distribution equipment	0	0.50	23 46
Utility Poles (Use only if different from Existing Electrical Utilities Plan poles)						
33	E-POLE-UTIL	E-POLEUTM-	Poles	0	0.50	203 45
34	E-POLE-IDEN	E-POLEIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
35	E-POLE-GUYS	E-POLEGYM-	Guying equipment	0	0.50	203 45
36	E-POLE-GUYS-IDEN	E-POLEGIM-	Guying equipment identifier tags, symbol modifiers, and tex	0	0.35	Y/2 Y/4
Underground Ductbanks (to be used when multiple systems are in one ductbank system)						
37	E-DUCT-MULT	E-DUCTMUM-	Ductbank	EUDUCN	0.50	83 42
38	E-DUCT-MULT-IDEN	E-DUCTMIM-	Identifier tags, symbol modifier and tex	0	0.35	Y/2 Y/4
Demolition (used only in creating Existing/Demolition model files)						
56	E-STAT-DEMO-PHS1	E-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	E-STAT-DEMO-PHS2	E-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	E-STAT-DEMO-PHS3	E-----M-D---3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0	0.25	G/3 G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Airfield Lighting Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Reference keynotes with associated leaders	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	E-ANNO-REFR	E----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Airfield Lighting Circuits						
11	E-CIRC-SERS	E-CIRCSEM-	Series circuits	0	0.50	203 45
12	E-CIRC-MULT	E-CIRCMUM-	Multiple circuits	0	0.50	23 46
13	E-CIRC-CTRL	E-CIRCCTM-	Control and monitoring circuits	0	0.50	163 41
15	E-CIRC-IDEN	E-CIRCIDM-	Identifier tags, symbol modifier, and tex	0	0.35	Y/2 Y/4
Devices						
20	E-AIRF-DEVC	E-AIRFDEM-	Capacitors, voltage regulators, motors, buses, generators, meters, grounds, and markers	0	0.50	23 46
Junction Boxes						
23	E-AIRF-JBOX	E-AIRFJBM-	Junction boxes, pull boxes, manholes, handholes, pedestals, splice	0	0.50	23 46
Lights						
25	E-LITE-OBST	E-LITEOBM-	Obstruction lights	0	0.50	203 45
26	E-LITE-DIST	E-LITEDIM-	Distance and arresting gear markers	0	0.50	203 45
28	E-LITE-APPR	E-LITEAPM-	Approach lights	0	0.50	203 45
29	E-LITE-THRS	E-LITETHM-	Threshold lights	0	0.50	203 45
30	E-LITE-RUNW	E-LITERUM-	Runway lights	0	0.50	203 45
31	E-LITE-TAXI	E-LITETAM-	Taxiway lights	0	0.50	203 45
32	E-LITE-LANE	E-LITELAM-	Hoverlane, taxilane, and helipad lights	0	0.50	203 45
33	E-LITE-SIGN	E-LITESIM-	Taxiway guidance signs	0	0.50	203 45
Ductbank						
37	E-AIRF-DUCT	E-AIRFDUM-	Ductbanks	EUDUCN	0.50	83 42
Beacons						
42	E-BCNS-IDEN	E-BCNSIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
43	E-BCNS-STRB	E-BCNSSTM-	Strobe beacons	0	0.50	203 45
44	E-BCNS-MISC	E-BCNSMIM-	Miscellaneous navaids - windcones and beacons	0	0.50	203 45
Demolition (used only in creating Existing/Demolition model files)						
56	E-STAT-DEMO-PHS1	E-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	E-STAT-DEMO-PHS2	E-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	E-STAT-DEMO-PHS3	E-----M-D---3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Clearances and working space information (NEC code, etc.)	0	0.25	G/3 G/2

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Model File Type: Details

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Keynotes with associated terminators	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Reference bubbles, matchlines and breaklines	0	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Detail title text, text and associated leaders, notes	0	0.35	Y/2 Y/4
Detail Information						
11	E-DETL-GRPH	E-DETLGRM-	Graphics, gridlines, non-text items	V	V	V V
12	E-DETL-METR	E-DETLMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	E-DETL-INPD	E-DETLINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Information and notes for other disciplines	V	V	V V

Note: V = Varies

Discipline: Electrical

Model File Type: Riser/One-Line Diagrams

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	E-ANNO-DIMS	E----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	E-ANNO-KEYN	E----KEP-	Keynotes with associated terminators	0	V	V V
3	E-ANNO-NPLT	E----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	E-ANNO-PATT	E----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	E-ANNO-NOTE	E----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	E-ANNO-SYMB	E----SYP-	Miscellaneous symbols	0	0.35	M/6 M/5
7	E-ANNO-TEXT	E----TEP-	Miscellaneous text and callouts with associated leaders	0	0.35	Y/2 Y/4
Diagram Information						
11	E-DIAG-GRPH	E-DIAGGRM-	Graphics, gridlines, non-text items	V	V	V
12	E-DIAG-METR	E-DIAGMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	E-DIAG-INPD	E-DIAGINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
14	E-DIAG-IDEN	E-DIAGIDM-	Identifier tags, symbol modifier and text	0	0.35	Y/2 Y/4
Other Discipline Information						
60	E-DISC-INFO	E-DISCINM-	Information and notes for other disciplines	V	V	V V

Note: V = Varies

Discipline: Telecommunications

Model File Type: Telephone/Data Plan

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	T-ANNO-DIMS	T----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	T-ANNO-KEYN	T----KEP-	Reference keynotes with associated leaders	0	V	V V
3	T-ANNO-NPLT	T----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	T-ANNO-PATT	T----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	T-ANNO-NOTE	T----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	T-ANNO-SYMB	T----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	T-ANNO-TEXT	T----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	T-ANNO-REFR	T----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Floor Information						
8	T-FLOR-IDEN	T-FLORIDM-	Room name, space identification text (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
9	T-FLOR-NUMB	T-FLORNUM-	Room/space identification number and symbol (copied from Architectural - Floor Plan model file)	0	0.25	G/3 G/2
Telecommunications Equipment						
10	T-EQPM-COPP	T-EQPMCOM-	Distribution equipment for copper	0	0.50	C/4 C/7
11	T-EQPM-FIBR	T-EQPMFIM-	Distribution equipment for fiber optic	0	0.50	C/4 C/7
12	T-EQPM-RELA	T-EQPMREM-	Relays, resistors, capacitors, and inducers	0	0.50	C/4 C/7
13	T-EQPM-OTHR	T-EQPMOTM-	Other telecommunications equipment	0	0.50	C/4 C/7
15	T-EQPM-COMB	T-EQPMCMW-	Distribution equipment for both copper and fiber optic:	0	0.50	C/4 C/7
Junction Boxes						
14	T-COMM-JBOX	T-COMMJBIM-	Junction boxes	0	0.50	83 42
Jacks						
28	T-JACK-IDEN	T-JACKIDM-	Identifier tags, symbol modifier, and text	0	0.35	Y/2 Y/4
29	T-JACK-PHON	T-JACKPHM-	Telephone jacks	0	0.50	203 45
30	T-JACK-DATA	T-JACKDAM-	Data/LAN jacks	0	0.50	203 45
31	T-JACK-COMB	T-JACKCOM-	Combination telephone and data/LAN jacks	0	0.50	203 45
Cable System						
50	T-CABL-COAX	T-CABLCOM-	Coax cable	2	0.50	83 42
51	T-CABL-FIBR	T-CABLFIM-	Fiber optics cable	FIBOPT	0.50	83 42
52	T-CABL-IDEN	T-CABLIDM-	Cable identifiers	0	0.35	Y/2 Y/4
53	T-CABL-MULT	T-CABLMUM-	Multi-conductor cable	V	0.50	83 42
54	T-CABL-TRAY	T-CABLTRM-	Cable trays and wireways	0	0.50	203 45
Demolition (used only in creating Existing/Demolition model files)						
56	T-STAT-DEMO-PHS1	T-----M-D---1	Demolition - phase 1	0	0.50	203 45
57	T-STAT-DEMO-PHS2	T-----M-D---2	Demolition - phase 2	0	0.50	83 42
58	T-STAT-DEMO-PHS3	T-----M-D---3	Demolition - phase 3	0	0.50	163 41
Other Discipline Information						
60	T-DISC-INFO	T-DISCINM-	Information and notes for other disciplines	V	V V	V

Note: V = Varies, NA = Not Applicable

Discipline: Telecommunications

Model File Type: Riser Diagrams

Level #	Level/Layer Naming		Level/Layer Description	Graphics		
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#
General Information						
1	T-ANNO-DIMS	T----DIP-	Witness/extension lines, dimension terminators, dimension text	0	V	V V
2	T-ANNO-KEYN	T----KEP-	Reference keynotes with associated leaders	0	V	V V
3	T-ANNO-NPLT	T----NPP-	Non-plotting graphic information	V	0.18	B/5 B/1
4	T-ANNO-PATT	T----PAP-	Miscellaneous patterning and hatching	0	0.18	Gr/8 Gr/9
5	T-ANNO-NOTE	T----NOP-	General notes and general remarks	0	0.35	Y/2 Y/4
6	T-ANNO-SYMB	T----SYP-	Miscellaneous symbols	V	0.35	M/6 M/5
7	T-ANNO-TEXT	T----TEP-	Miscellaneous text and callouts with associated leaders	0	V	V V
NA	T-ANNO-REFR	T----RFP-	Reference files (AutoCAD users only, see Chapter 4)	NA	NA	NA NA
Diagram Information						
11	T-DIAG-GRPH	T-DIAGGRM-	Graphics, gridlines, non-text items	V	V	V V
12	T-DIAG-METR	T-DIAGMEM-	Metric-specific dimensions and notes	0	0.35	Y/2 Y/4
13	T-DIAG-INPD	T-DIAGINM-	Inch-pound-specific dimensions and notes	0	0.35	Y/2 Y/4
14	T-DIAG-IDEN	T-DIAGIDM-	Identifier tags, symbol modifier and text	0	0.35	Y/2 Y/4
Other Discipline Information						
60	T-DISC-INFO	T-DISCINM-	Information and notes for other disciplines	V	V	V V

Note: V = Varies, NA = Not Applicable

Appendix B

Sheet File Level/Layer Assignment Tables

This appendix provides the sheet file level/layer assignment tables:

General	B3
Hazardous Materials	B4
Survey/Mapping	B5
Geotechnical	B6
Civil	B7
Landscape	B8
Structural	B9
Architectural	B10
Interiors.....	B11
Fire Protection	B12
Plumbing	B13
Mechanical	B14
Electrical.....	B15
Telecommunications.....	B16

Discipline: General

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
2	G-ANNO-KEYN	G----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	G-ANNO-LEGN	G----LEP-	Legends and schedules	0	V	V	V
4	G-ANNO-PATT	G----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	G-ANNO-NOTE	G----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	G-ANNO-SYMB	G----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M/6	M/5
7	G-ANNO-TEXT	G----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	G-ANNO-REDL	G----REP-	Redlines	0	0.25	R/1	R/3
63	G-ANNO-REVS	G----RVP-	Revisions	0	0.50	C/4	C/7
NA	G-ANNO-REFR	G----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Hazardous Materials

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	H-ANNO-DIMS	H-----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	H-ANNO-KEYN	H-----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	H-ANNO-LEGN	H-----LEP-	Legends and schedules	0	V	V	V
4	H-ANNO-PATT	H-----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	H-ANNO-NOTE	H-----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	H-ANNO-SYMB	H-----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	H-ANNO-TEXT	H-----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	H-ANNO-REDL	H-----REP-	Redlines	0	0.25	R/1	R/3
63	H-ANNO-REVS	H-----RVP-	Revisions	0	0.50	C/4	C/7
NA	H-ANNO-REFR	H-----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Survey/Mapping

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	V-ANNO-DIMS	V-----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	V-ANNO-KEYN	V-----KEP-	Sheet-specific referencekeynotes with associated leaders	0	V	V	V
3	V-ANNO-LEGN	V-----LEP-	Legends and schedules	0	V	V	V
4	V-ANNO-PATT	V-----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	V-ANNO-NOTE	V-----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	V-ANNO-SYMB	V-----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	V-ANNO-TEXT	V-----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	V-ANNO-REDL	V-----REP-	Redlines	0	0.25	R/1	R/3
63	V-ANNO-REVS	V-----RVP-	Revisions	0	0.50	C/4	C/7
NA	V-ANNO-REFR	V-----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Geotechnical

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	B-ANNO-DIMS	B----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	B-ANNO-KEYN	B----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	B-ANNO-LEGN	B----LEP-	Legends and schedules	0	V	V	V
4	B-ANNO-PATT	B----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	B-ANNO-NOTE	B----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	B-ANNO-SYMB	B----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	B-ANNO-TEXT	B----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	B-ANNO-REDL	B----REP-	Redlines	0	0.25	R/1	R/3
63	B-ANNO-REVS	B----RVP-	Revisions	0	0.50	C/4	C/7
NA	B-ANNO-REFR	B----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Civil

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	C-ANNO-DIMS	C----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	C-ANNO-KEYN	C----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	C-ANNO-LEGN	C----LEP-	Legends and schedules	0	V	V	V
4	C-ANNO-PATT	C----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	C-ANNO-NOTE	C----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	C-ANNO-SYMB	C----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	C-ANNO-TEXT	C----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	C-ANNO-REDL	C----REP-	Redlines	0	0.25	R/1	R/3
63	C-ANNO-REVS	C----RVP-	Revisions	0	0.50	C/4	C/7
NA	C-ANNO-REFR	C----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Landscape

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	L-ANNO-DIMS	L-----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	L-ANNO-KEYN	L-----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	L-ANNO-LEGN	L-----LEP-	Legends and schedules	0	V	V	V
4	L-ANNO-PATT	L-----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	L-ANNO-NOTE	L-----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	L-ANNO-SYMB	L-----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	L-ANNO-TEXT	L-----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	L-ANNO-REDL	L-----REP-	Redlines	0	0.25	R/1	R/3
63	L-ANNO-REVS	L-----RVP-	Revisions	0	0.50	C/4	C/7
NA	L-ANNO-REFR	L-----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Structural

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	S-ANNO-DIMS	S----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	S-ANNO-KEYN	S----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	S-ANNO-LEGN	S----LEP-	Legends and schedules	0	V	V	V
4	S-ANNO-PATT	S----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	S-ANNO-NOTE	S----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	S-ANNO-SYMB	S----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	S-ANNO-TEXT	S----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	S-ANNO-REDL	S----REP-	Redlines	0	0.25	R/1	R/3
63	S-ANNO-REVS	S----RVP-	Revisions	0	0.50	C/4	C/7
NA	S-ANNO-REFR	S----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Architectural

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	A-ANNO-DIMS	A----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	A-ANNO-KEYN	A----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	A-ANNO-LEGN	A----LEP-	Legends and schedules	0	V	V	V
4	A-ANNO-PATT	A----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	A-ANNO-NOTE	A----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	A-ANNO-SYMB	A----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	A-ANNO-TEXT	A----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	A-ANNO-REDL	A----REP-	Redlines	0	0.25	R/1	R/3
63	A-ANNO-REVS	A----RVP-	Revisions	0	0.50	C/4	C/7
NA	A-ANNO-REFR	A----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Interiors

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	I-ANNO-DIMS	I----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	I-ANNO-KEYN	I----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	I-ANNO-LEGN	I----LEP-	Legends and schedules	0	V	V	V
4	I-ANNO-PATT	I----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	I-ANNO-NOTE	I----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	I-ANNO-SYMB	I----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	I-ANNO-TEXT	I----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	I-ANNO-REDL	I----REP-	Redlines	0	0.25	R/1	R/3
63	I-ANNO-REVS	I----RVP-	Revisions	0	0.50	C/4	C/7
NA	I-ANNO-REFR	I----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Fire Protection

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	F-ANNO-DIMS	F----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	F-ANNO-KEYN	F----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	F-ANNO-LEGN	F----LEP-	Legends and schedules	0	V	V	V
4	F-ANNO-PATT	F----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	F-ANNO-NOTE	F----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	F-ANNO-SYMB	F----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	F-ANNO-TEXT	F----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	F-ANNO-REDL	F----REP-	Redlines	0	0.25	R/1	R/3
63	F-ANNO-REVS	F----RVP-	Revisions	0	0.50	C/4	C/7
NA	F-ANNO-REFR	F----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Plumbing

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	P-ANNO-DIMS	P----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	P-ANNO-KEYN	P----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	P-ANNO-LEGN	P----LEP-	Legends and schedules	0	V	V	V
4	P-ANNO-PATT	P----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	P-ANNO-NOTE	P----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	P-ANNO-SYMB	P----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	P-ANNO-TEXT	P----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	P-ANNO-REDL	P----REP-	Redlines	0	0.25	R/1	R/3
63	P-ANNO-REVS	P----RVP-	Revisions	0	0.50	C/4	C/7
NA	P-ANNO-REFR	P----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Mechanical

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	M-ANNO-DIMS	M-----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	M-ANNO-KEYN	M-----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	M-ANNO-LEGN	M-----LEP-	Legends and schedules	0	V	V	V
4	M-ANNO-PATT	M-----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	M-ANNO-NOTE	M-----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	M-ANNO-SYMB	M-----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	M-ANNO-TEXT	M-----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	M-ANNO-REDL	M-----REP-	Redlines	0	0.25	R/1	R/3
63	M-ANNO-REVS	M-----RVP-	Revisions	0	0.50	C/4	C/7
NA	M-ANNO-REFR	M-----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Electrical

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	E-ANNO-DIMS	E----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	E-ANNO-KEYN	E----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	E-ANNO-LEGN	E----LEP-	Legends and schedules	0	V	V	V
4	E-ANNO-PATT	E----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	E-ANNO-NOTE	E----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	E-ANNO-SYMB	E----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	E-ANNO-TEXT	E----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	E-ANNO-REDL	E----REP-	Redlines	0	0.25	R/1	R/3
63	E-ANNO-REVS	E----RVP-	Revisions	0	0.50	C/4	C/7
NA	E-ANNO-REFR	E----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Discipline: Telecommunications

Level #	Level/Layer Naming		Level/Layer Description	Graphics			
	AIA Format	ISO Format		Line Style	Line Width (mm)	AutoCAD Line Color/#	MicroStation Line Color/#
General Information							
1	T-ANNO-DIMS	T-----DIP-	Sheet-specific dimensions (includes witness/extension lines, dimension terminators, dimension text)	0	V	V	V
2	T-ANNO-KEYN	T-----KEP-	Sheet-specific reference keynotes with associated leaders	0	V	V	V
3	T-ANNO-LEGN	T-----LEP-	Legends and schedules	0	V	V	V
4	T-ANNO-PATT	T-----PAP-	Sheet-specific patterning and hatching (e.g., keyplan patterning)	0	0.18	Gr/8	Gr/9
5	T-ANNO-NOTE	T-----NOP-	Sheet-specific notes and general remarks	0	0.35	Y/2	Y/4
6	T-ANNO-SYMB	T-----SYP-	Sheet-specific symbols (e.g., scales, north arrow, section cuts, detail bubbles, etc.)	V	0.35	M6	M/5
7	T-ANNO-TEXT	T-----TEP-	Sheet-specific text and callouts with associated leaders (e.g., title block text, legend and schedule text)	0	V	V	V
62	T-ANNO-REDL	T-----REP-	Redlines	0	0.25	R/1	R/3
63	T-ANNO-REVS	T-----RVP-	Revisions	0	0.50	C/4	C/7
NA	T-ANNO-REFR	T-----RFP-	Referenced model files (AutoCAD users only, see Chapter 4)	NA	NA	NA	NA

Note: V = Varies, NA = Not Applicable

Appendix C

Color Comparison

For more information on Screened Colors, see the section "Screening" in Chapter 3 "Graphic Concepts."

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
1	3	
2	4	
3	2	
4	7	
5	1	
6	5	
7	0	
8	9	
9	14	
10	10	Yes
11	19	Yes
12	27	Yes
13	35	Yes
14	43	Yes
15	51	Yes
16	59	Yes
17	67	
18	75	
19	83	Yes
20	6	
21	30	
22	22	
23	46	
24	38	
25	62	
26	54	
27	78	
28	70	
29	94	
30	86	
31	110	
32	102	
33	126	
34	118	
35	142	
36	134	
37	158	
38	150	
39	174	
40	166	
41	190	
42	182	
43	206	
44	198	
45	222	
46	214	

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
47	238	
48	230	
49	251	
50	20	Yes
51	28	Yes
52	36	Yes
53	44	Yes
54	52	Yes
55	60	Yes
56	68	Yes
57	76	
58	84	
59	92	Yes
60	100	
61	108	
62	116	
63	124	
64	132	
65	140	
66	148	
67	156	
68	164	
69	172	
70	180	
71	188	
72	196	
73	204	
74	212	
75	220	
76	228	
77	236	
78	244	
79	252	
80	11	
81	26	
82	18	
83	42	
84	34	
85	58	
86	50	
87	74	
88	66	
89	90	
90	82	Yes
91	106	Yes
92	98	Yes

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
93	122	Yes
94	114	Yes
95	138	Yes
96	130	Yes
97	154	
98	146	
99	170	Yes
100	162	
101	186	
102	178	
103	202	
104	194	
105	218	
106	210	
107	234	
108	226	
109	250	
110	242	
111	246	
112	247	
113	16	
114	32	
115	48	
116	64	
117	80	
118	96	
119	112	
120	12	
121	15	
122	23	
123	31	
124	39	
125	47	
126	55	
127	63	
128	71	
129	79	
130	87	Yes
131	95	Yes
132	103	Yes
133	111	Yes
134	119	Yes
135	127	Yes
136	135	Yes
137	143	
138	151	

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
139	159	Yes
140	167	
141	175	
142	183	
143	191	
144	199	
145	207	
146	215	
147	223	
148	231	
149	239	
150	40	
151	72	
152	88	
153	104	
154	136	
155	152	
156	184	
157	216	
158	232	
159	248	
160	17	
161	25	
162	33	
163	41	
164	49	
165	57	
166	65	
167	73	
168	81	
169	89	
170	97	Yes
171	105	Yes
172	113	Yes
173	121	Yes
174	129	Yes
175	137	Yes
176	145	Yes
177	153	
178	161	
179	169	Yes
180	177	
181	185	
182	193	
183	201	
184	209	

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
185	217	
186	225	
187	233	
188	241	
189	249	
190	245	
191	128	
192	144	
193	160	
194	176	
195	192	
196	208	
197	224	
198	240	
199	254	
200	13	
201	29	
202	21	
203	45	
204	37	
205	61	
206	53	
207	77	
208	69	
209	93	
210	85	Yes
211	109	Yes
212	101	Yes
213	125	Yes
214	117	Yes
215	141	Yes
216	133	Yes
217	157	
218	149	
219	173	Yes
220	165	
221	189	
222	181	
223	205	
224	197	
225	221	
226	213	
227	237	
228	229	
229	253	
230	91	

Appendix C Color Comparison		
AutoCAD Color No.	MicroStation Color No.	Screened Color
231	99	
232	107	
233	115	
234	123	
235	131	
236	139	
237	147	
238	155	
239	163	
240	171	
241	179	
242	187	
243	195	
244	203	
245	211	
246	219	
247	227	
248	235	
249	243	
250	8	Yes
251	200	Yes
252	168	Yes
253	120	Yes
254	56	Yes
255	24	Yes

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) September 2001		2. REPORT TYPE Final report		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE A/E/C CADD Standard, Release 2.0; Main Text and Appendices A, B, and C		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) The CADD/GIS Technology Center		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199		8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/ITL TR-01-6			
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES Appendix D is bound separately.					
14. ABSTRACT <p>The “A/E/C CADD Standard Manual” has been developed by the CADD/GIS Technology Center (CGTC) to reduce redundant CADD standardization efforts within the Army, Navy, and Air Force. The manual is part of an initiative to consolidate existing CADD drafting standards and to develop data standards that address the entire life-cycle of facilities within the Department of Defense Tri-Service.</p> <p>The CADD drafting standards addressed in the “A/E/C CADD Standard Manual” include presentation graphics, level/layer assignments, metric/English scales, electronic file naming, and standard symbology. As the manual evolves, it will also include nongraphic database standards that address issues such as cost engineering and specification generation. The CGTC’s primary goal is to develop a CADD standard that is generic enough to operate under various CADD software packages (such as Intergraph’s MicroStation and Autodesk’s AutoCAD) and incorporate existing industry standards when possible.</p>					
15. SUBJECT TERMS A/E/C CADD		CADD standards Drafting standards			
16. SECURITY CLASSIFICATION OF:		17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED			c. THIS PAGE UNCLASSIFIED	
			176		



The CADD/GIS Technology Center

for facilities, infrastructure, and environment

A/E/C CADD Standard

Main Text and Appendices A, B, and C Appendix D

The A/E/C CADD Standard is
compliant with Version 2.0
of the U.S. National
CAD Standard.

The A/E/C CADD Standard
contains supplemental materials
and DoD specific requirements
not addressed in the U.S. National
CAD Standard.



Release 2.0

Approved For Public Release; Distribution Is Unlimited

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products.

The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.



PRINTED ON RECYCLED PAPER

A/E/C CADD Standard

Main Text and Appendices A, B, and C
Appendix D

Release 2.0

Approved for public release; distribution is unlimited

Appendix D

A/E/C CADD Symbology

This appendix provides the A/E/C CADD Symbology as follows:

General Drafting

Lines

DEMOLN – Demolition Line D1-3

Symbols

BREAK – Break Line Symbol D1-7
CNTLIN – Centerline Symbol D1-7
COLLIN – Column Line/
 Grid Indicator D1-7
DBLARR – Double Arrow Terminator. D1-7
DTLIND – Detail Indicator D1-7
KEYIND – Detail Indicator D1-7
MAGNOR – Magnetic North Arrow D1-7
MATIND – Match Line Indicator..... D1-7
NORIND – North Indicator D1-7
NOTIND – Note Indicator D1-8
REVIND – Revision Indicator D1-8
S00005 – Scale 1 : 5 D1-8
S00010 – Scale 1 : 10 D1-8
S0001B – Scale 1" = 1'-0" D1-8
S0001G – Scale 1" = 1'-0" D1-8
S00020 – Scale 1 : 20 D1-8
S0003B – Scale 3" = 1'-0" D1-8
S0003G – Scale 3" = 1'-0" D1-8
S00050 – Scale 1 : 50 D1-9
S000B – Scale 1" = 1" D1-9
S00100 – Scale 1 : 100 D1-9
S0012B – Scale 1/2" = 1'-0" D1-9
S0012G – Scale 1/2" = 1'-0" D1-9
S0014B – Scale 1/4" = 1'-0" D1-9
S0014G – Scale 1/4" = 1'-0" D1-9
S0015B – Scale 1-1/2" = 1'-0" D1-9
S0015G – Scale 1-1/2" = 1'-0" D1-9

S0016B – Scale 1/16" = 1'-0" D1-10
S0016G – Scale 1/16" = 1'-0" D1-10
S0018B – Scale 1/8" = 1'-0" D1-10
S0018G – Scale 1/8" = 1'-0" D1-10
S00200 – Scale 1 : 200 D1-10
S0020B – Scale 1" = 20'-0" D1-10
S0020G – Scale 1" = 20'-0" D1-10
S0030B – Scale 1" = 30'-0" D1-10
S0030G – Scale 1" = 30'-0" D1-10
S0034B – Scale 3/4" = 1'-0" D1-11
S0034G – Scale 3/4" = 1'-0" D1-11
S0040B – Scale 1" = 40'-0" D1-11
S0040G – Scale 1" = 40'-0" D1-11
S00500 – Scale 1 : 500 D1-11
S0050B – Scale 1" = 50'-0" D1-11
S0050G – Scale 1" = 50'-0" D1-11
S0060B – Scale 1" = 60'-0" D1-11
S0060G – Scale 1" = 60'-0" D1-11
S01000 – Scale 1 : 1000 D1-12
S0100B – Scale 1" = 100'-0" D1-12
S0100G – Scale 1" = 100'-0" D1-12
S0200B – Scale 1" = 200'-0" D1-12
S0200G – Scale 1" = 200'-0" D1-12
S0400B – Scale 1" = 400'-0" D1-12
S0400G – Scale 1" = 400'-0" D1-12
S05000 – Scale 1 : 5000 D1-12
S0500B – Scale 1" = 500'-0" D1-12
S0500G – Scale 1" = 500'-0" D1-13
S06000 – Scale 1 : 6000 D1-13
S10000 – Scale 1 : 10000 D1-13
S1000B – Scale 1" = 1000'-0" D1-13
S1000G – Scale 1" = 1000'-0" D1-13
S20000 – Scale 1 : 20000 D1-13
S2000B – Scale 1" = 2000'-0" D1-13
S2000G – Scale 1" = 2000'-0" D1-13
SECIN1 – Section Indicator D1-13
SECIN2 – Section Indicator D1-14
SECIN3 – Section Indicator D1-14

Hazardous Materials

Lines

HAZMAT – Hazardous Material Transport D2-3

Symbols

AIRQST – Air Quality Monitoring Station..... D2-7
AIRSMP – Air Sample Location D2-7
BIOSMP – Biological Sample Location D2-7
EGDECN – Equipment DecontaminationD2-7
EGONST – Onsite Command Post..... D2-7
EGSITE – Site Information Center D2-7
EGWASH – Washdown Water Tank.... D2-7
EHZMSA – Hazmat Storage Location.. D2-7
EHZMSB – Hazmat Storage Building ..D2-7
EHZMSR – Hazmat Storage Room D2-8
EHZMSV – Hazmat Storage Vault..... D2-8
EHZWSA – Hazwaste Storage LocationD2-8
EHZWSB – Hazwaste Storage BuildingD2-8
EHZWSR – Hazwaste Storage Room ... D2-8
EHZWSV – Hazwaste Storage Vault.... D2-8
EMGSHW – Emergency Shower..... D2-8
EPOLLS – Pollution Source Site D2-8
EYEWAS – Emergency Eyewash..... D2-8
GWTQST – Groundwater Quality Monitoring Station..... D2-9
LANGAS – Landfill Gas Monitor ProbeD2-9
MAGLOC – Magnetometer Det. Locat. D2-9
MATSMP – Solid Material Sample Location..... D2-9
PRRLOC – Potential Release Location. D2-9
RESTR – Restricted Access..... D2-9
SEDSMP – Sediment Sample Location D2-9
SOLGAS – Soil Gas Monitoring Probe D2-9
SOLSMP – Soil Sample Location..... D2-9
SPLRES – Spill Response..... D2-10
SPLTNK – Spill Containment Tank ... D2-10
SURSMP – Surface Water Sample LocD2-10
SWTQST – Surface Water Quality Monitoring Station..... D2-10
WASSMP – Waste Sample Location.. D2-10
WAT SMP – Groundwater Sample LocD2-10

Survey/Mapping

Lines

16THLN – Sixteenth Line.....D3-3
BARDIT – Ditch Barrier.....D3-3
BARDTB – Ditch and Berm Barrier.....D3-3
BARGEN – Generic Security Barrier ...D3-3
BARMAS – Security Masonry Barrier .D3-3
CMP12 – CMP 12 in. Diameter Linear PatternD3-3
CMPU12 – CMP up to 12 in. Diameter Linear PatternD3-3
COMARX – Existing Aerial Communication LineD3-3
COMUGX – Existing Underground Communication LineD3-3
CONLMT – Construction LimitD3-4
CULVRT – Culvert Pipe.....D3-4
DITCH – Ditch LineD3-4
EPARX – Existing Aerial Primary Electrical LineD3-4
EPUGX – Existing Underground Primary Electrical LineD3-4
ESARX – Existing Aerial Secondary Electrical LineD3-4
ESUGX – Existing Underground Secondary Electrical LineD3-4
EUDUCX – Existing Underground DuctbankD3-4
FENCE – FenceD3-4
FIBOPT – Fiber Optics Line.....D3-5
FIRE – Fire Protection Water Supply ...D3-5
FUELOR – Fuel Oil Return.....D3-5
FUELOS – Fuel Oil Supply.....D3-5
FUELOV – Fuel Oil Tank Vent.....D3-5
GUARD – GuardrailD3-5
IDXDC – Index Depth ContourD3-5
IWASTE – Industrial WasteD3-5
LIQPET – Liquid Petroleum Gas.....D3-5
MINRDC – Minor Depth ContourD3-6
NONPOT – Nonpotable WaterD3-6
NTGASX – Exist. Natural Gas Piping..D3-6
PROJBL – Project Boundary LineD3-6
PROPL – Property LineD3-6
RAILS – Single RailroadD3-6
RTOWFY – Right of WayD3-6
SSWAFX – Existing Sanitary SewerD3-6

STRAFX – Existing Storm Drain	D3-6
TREEL – Tree Line	D3-7
WATRX – Existing Water Line.....	D3-7

Patterns

CONC – Concrete	D3-11
CONCST – Concrete, Stone	D3-11
EEARTH – Existing Earth.....	D3-11
EROCK – Existing Rock.	D3-11
FILLSC – Fill Section.....	D3-11
GRAVEL – Gravel	D3-11
GROUT – Grout	D3-11
LSWAMP – Large Swamp	D3-11
POROUS – Porous.....	D3-11
RIPRAP – Riprap.....	D3-12

Symbols

ACLLEL – Elevated Approach	
Lightbar	D3-15
ACLLSF – Semiflush Approach	
Lightbar	D3-15
AERO – Seaplane Anchorage Buoy ...	D3-15
AFBCN – Airfield Beacon.....	D3-15
AIRFLD – Airfield Symbol	D3-15
ANCHR1 – Anchorage Large Vessel .	D3-15
ANCHR2 – Anchorage Large Vessel .	D3-15
ANCHR3 – Anchorage Small Vessel .	D3-15
ANCHR4 – Anchorage Small Vessel .	D3-15
ANCHR5 – Anchorage Small Vessel .	D3-16
ANCHRB – Anchor Berth.....	D3-16
ARROW – Arrow Terminator.....	D3-16
BAR1 – Barrel Buoy.....	D3-16
BAR1C – Barrel Buoy, Indicate Color	D3-16
BAR2 – Barrel Buoy.....	D3-16
BARD – Barrel Buoy, Diagonal Stripe	D3-16
BARLT1 – Barrel Buoy, Lighted.....	D3-16
BARLT2 – Barrel Buoy, Lighted.....	D3-16
BARMKR – Barrier Marker	D3-17
BARV – Barrel Buoy, Vertical Stripe.	D3-17
BARVT – Barrel Buoy, Vertical Stripe, w/Topmark	D3-17
BCN1 – General Beacon.....	D3-17
BCN2 – General Beacon.....	D3-17
BCN3 – General Beacon.....	D3-17
BCN4 – General Beacon.....	D3-17
BCN5 – General Beacon.....	D3-17

BCNBY1 – Buoyant Beacon	D3-17
BCNBY2 – Buoyant Beacon	D3-18
BCNLT1 – Lighted Beacon	D3-18
BCNLT2 – Lighted Beacon	D3-18
BCNLT3 – Lighted Beacon	D3-18
BCNRES – Resilient Beacon	D3-18
BCNTG1 – Telegraphic Mooring Beacon	D3-18
BCNTG2 – Telegraphic Mooring Beacon	D3-18
BCNTP1 – Telephonic Mooring Beacon	D3-18
BCNTP2 – Telephonic Mooring Beacon	D3-18
BCNTR1 – Triangular Beacon.....	D3-19
BCNTR2 – Triangular Beacon.....	D3-19
BM – Bench Mark	D3-19
BMALT – Bench Mark Alternate	D3-19
BNDMRK – Boundary Mark.....	D3-19
BREAK – Break Line Symbol	D3-19
BYANCH – Anchorage Buoy.....	D3-19
BYBELB – Bell Barrel Buoy.....	D3-19
BYBELP – Bell Pillar Buoy	D3-19
BYCHEC – Checkered Buoy.....	D3-20
BYCOMP – Compass Adjustment Buoy	D3-20
BYEXPL – Explosive Anchorage Buoy	D3-20
BYFISH – Fish Trap Buoy	D3-20
BYGONB – Gong Barrel Buoy	D3-20
BYGONP – Gong Pillar Buoy	D3-20
BYJUNC – Junction Buoy.....	D3-20
BYPOS – Position of Buoy.....	D3-20
BYQUAR – Quarantine Buoy	D3-20
BYWAV1 – Wave Actuated Bell Buoy	D3-21
BYWAV2 – Wave Actuated Bell Buoy	D3-21
BYWHIB – Whistle Barrel Buoy.....	D3-21
BYWHIP – Whistle Pillar Buoy	D3-21
CABCNZ – Cable Crossing Zone	D3-21
CABDIS – Disused Submarine Cable.	D3-21
CABLАН – Cable Landing Beacon....	D3-21
CABLE – Submarine Cable	D3-21
CABLE1 – Submarine Cable Area	D3-21
CABLE2 – Submarine Cable Area	D3-22
CABPWR – Submarine Power Area...	D3-22
CAIRN1 – Cairn	D3-22
CAIRN2 – Cairn	D3-22

CAIRN3 – Cairn	D3-22	FLARRL – Flow Arrow Left in 0 Pt...D3-26
CAIRN4 – Cairn	D3-22	FLARRR – Flow Arrow Right in 0 Pt.D3-26
CAN1 – Can Buoy	D3-22	FLDGAT – Flood Gate
CAN2 – Can Buoy	D3-22	FOG – Fog Signal
CANWT – White Can Buoy w/Topmark	D3-22	FOGBCN – Fog Signal Beacon
CATBSN – Catch Basin	D3-23	FOGBY – Fog Signal Buoy
CATBSR – Round Catch Basin.....	D3-23	FOGLS – Fog Signal Light Ship.....
CDHDR – Core Drill Hole Drilled	D3-23	FOGLSM – Fog Signal Light Ship, Manned.....
CDHUDR – Core Drill Hole Undrilled	D3-23	FOMETR – Fuel Oil Meter.....
CGRES1 – Coast Guard Rescue Station.....	D3-23	FOMHOL – Fuel Oil Manhole
CGRES2 – Coast Guard Rescue Station.....	D3-23	FOVALT – Fuel Oil Vault.....
CGRESS3 – Coast Guard Rescue Station.....	D3-23	GREASE – Grease Trap
CKTID – Circuit ID Symbol.....	D3-23	GRITCH – Grit Chamber.....
CLNOUT – Cleanout.....	D3-23	GSMETR – Gas Meter.....
CMHLX – Existing Communication Manhole	D3-24	GSMHOL – Gas Manhole
CNR90 – Corner Solid 90.....	D3-24	GSPLNT – Gas Plant
CNRNF – Corner Not Found.....	D3-24	GSRECR – Gas Receiver.....
CNRSF – Corner Solid Flat	D3-24	GSTRAP – Gas Trap
CNTLIN – Centerline Symbol	D3-24	GSVALT – Gas Valve Vault
COAST1 – Coast Guard Station	D3-24	HEADWL – Headwall
COAST2 – Coast Guard Station	D3-24	HLL – Hoverlane Light.....
COAST3 – Coast Guard Station	D3-24	HLLL – Hoverlane Limit Light.....
COAST4 – Coast Guard Station	D3-24	HORCPT – Horizontal Control Point .D3-29
CULVEE – Culvert End Symbol	D3-25	HOVCPT – Horiz. Vert. Control PointD3-29
DBID – Ductbank ID Symbol.....	D3-25	HPIL – Helipad Inset Light.....
DBLARR – Double Arrow Terminator	D3-25	HPPLEL – Elevated Helipad Perimeter Light
DGUYX – Down Guy.....	D3-25	HPPLSF – Semiflush Helipad Perimeter Light
DISPLT – Disused Platform	D3-25	HUREYE – Hurricane Eye
DNGPB – Lighted Danger Pillar Buoy	D3-25	HYDRNT – Hydrant
DNGRK – Danger Underwater Rocks Depth Unknown	D3-25	INSHWY – Interstate Hwy. Symbol ...D3-30
DNGRK1 – Danger Underwater Rocks Depth Unknown	D3-25	INSTBY – Oil Gas Installation Buoy..D3-30
DNGSB – Lighted Danger Spar Buoy	D3-25	IWMETR – Industrial Waste Water Meter
DOLPHN – Dolphin	D3-26	IWMHOL – Industrial Waste ManholeD3-30
DSTMKR – Runway Distance Marker	D3-26	JETTY – Jetty
DSWTCH – Distribution Switch	D3-26	JNBX – Junction Box
DTHL – Displace Threshold Light	D3-26	KELP – Kelp/Seaweed.....
EHHLX – Existing Electrical Handhole	D3-26	LANBY1 – Lanby Superbuoy Navaid D3-30
EMHLX – Existing Electrical Manhole.....	D3-26	LANBY2 – Lanby Superbuoy Navaid D3-30
FIXPNT – Fixed Point	D3-26	LATBCN – Lattice Beacon.....
		LIFEFT – Lifeboat Station
		LIFEM1 – Lifeboat at Mooring.....
		LIFEM2 – Lifeboat at Mooring.....
		LIMIT – Limit of Safety Zone
		LITSV1 – Floating Light

LITSV2 – Floating Light	D3-31
LOOKTR – Lookout Watch Station ...	D3-31
LTART – Articulated Light	D3-31
LTBEAC – Lighted Beacon.....	D3-32
LTBY – Lighted Buoy	D3-32
LTBYBB – Lighted Black Barrel Buoy	D3-32
LTFLD – Floodlight.....	D3-32
LTFLT – Float Light.....	D3-32
LTFLT1 – Float Light IALA	D3-32
LTFLT2 – Float Light IALA	D3-32
LTHOU1 – Lighthouse	D3-32
LTHOU2 – Lighthouse	D3-32
LTMAJ1 – Major Floating Light	D3-33
LTMAJ2 – Major Floating Light	D3-33
LTMARK – Lighted Marker.....	D3-33
LTMIN2 – Minor Floating Light	D3-33
LTPLT1 – Lighted Platform	D3-33
LTPLT2 – Lighted Platform	D3-33
LTPLX – Existing Light Pole	D3-33
LTSHP1 – Lighted Vessel Lightship ..	D3-33
LTSHP2 – Lighted Vessel Lightship ..	D3-33
LTSHP3 – Lighted Vessel Lightship ..	D3-34
LTSTRX – Existing Street Light Bracket.....	D3-34
LTTOW2 – Lighted Beacon Tower....	D3-34
LTVES2 – Unmanned Light Vessel....	D3-34
MARINA – Boat Harbor Marina	D3-34
MARKGD – Green Day Marker.....	D3-34
MARKRD – Red Day Marker	D3-34
MEAST – Lighted East Marker Buoy.	D3-34
MNORTH – North Arrow.....	D3-34
MONWEL – Monitoring Well.....	D3-35
MORB – Mooring Buoy	D3-35
MORBBB – Black Mooring Barrel Buoy	D3-35
MORBBW – White Mooring Barrel Buoy	D3-35
MORBCW – White Mooring Can Buoy	D3-35
MORTWR – Mooring Tower	D3-35
MOTRHP – Motor.....	D3-35
MSOUTH – Lighted South Marker Buoy	D3-35
MWEST – Lighted West Marker Buoy	D3-35
NOTICE – Notice Board.....	D3-36
NUN1 – Nun Buoy	D3-36
NUN2 – Nun Buoy	D3-36
NUNBT – Black Nun Buoy w/Topmark	D3-36
NUNWT – White Nun Buoy w/Topmark	D3-36
OBS – Obstruction	D3-36
OBSSPT – Observation Spot	D3-36
OBSTRL – Obstruction Light.....	D3-36
ODAS – ODAS Data Collection Buoy	D3-36
OUTB – Outfall Marking Buoy	D3-37
PAPI – PAPI Light Unit.....	D3-37
PHOCPT – Photo Control Point	D3-37
PIINFO – PI Information	D3-37
PIL1 – Pillar Buoy	D3-37
PIL2 – Pillar Buoy	D3-37
PILLT – Lighted Pillar Buoy	D3-37
PILM – Multicolored Pillar Buoy	D3-37
PILOT – Boarding Place	D3-37
PILOT1 – Pilot Office.....	D3-38
PILOT2 – Pilot Office.....	D3-38
PILV – Vertical Stripe Pillar Buoy ..	D3-38
PILVT – Vertical Stripe Pillar Buoy w/Topmark	D3-38
PIPDIS – Disused Pipeline Pipe	D3-38
PIPE – Water Sewer Outfall Intake....	D3-38
PIPE1 – Oil Gas Pipeline	D3-38
PIPE2 – Oil Gas Pipeline	D3-38
PIPES1 – Oil Gas Pipeline Area	D3-38
PIPES2 – Oil Gas Pipeline Area	D3-39
PIVALV – Post Indicator Valve	D3-39
PLAT1 – Prod Platform Oil Derrick...	D3-39
PLAT2 – Prod Platform Oil Derrick ...	D3-39
PLAT3 – Prod Platform Oil Derrick ...	D3-39
PMPSTA – Pump Station	D3-39
POLE1 – Pole Stake Perch.....	D3-39
POLE2 – Pole Stake Perch.....	D3-39
POLE3 – Pole Stake Perch.....	D3-39
POLEID – Pole Identification Symbol	D3-40
POLEP – Port Hand Stake Pole	D3-40
POLES – Starboard Hand Stake Pole .	D3-40
PRIVB – Private Barrel Buoy	D3-40
RADAR – Radar Station or Beacon....	D3-40
RADAR1 – Floating Radar Beacon....	D3-40
RADAR2 – Floating Radar Beacon....	D3-40
RADAR3 – Floating Radar Beacon....	D3-40
RADAR4 – Floating Radar Beacon....	D3-40
RADIO – General Radio Beacon	D3-41
RADRF1 – Radar Reflector or Feature	D3-41
RADRF2 – Radar Reflector or Feature	D3-41
RANGEX – Range Extension.....	D3-41

REEF – Coral Reef, Large Icon	D3-41
REEF1 – Coral Reef, Small Icon	D3-41
REFUG1 – Refuge Beacon	D3-41
REFUG2 – Refuge Beacon	D3-41
REIL – Reil Light Unit	D3-41
RESCUE – Rescue Station	D3-42
RESPLT – Observation Research Platform	D3-42
RGVALV – Regulator Valve	D3-42
RSTAR – Range Star	D3-42
RVMMOP – Open River Mile MarkerD3-42	
RVMMSO – Solid River Mile MarkerD3-42	
RWCLL – Runway Centerline Light ..	D3-42
RWEL – Runway End Light	D3-42
RWLEL – Elevated Runway Edge Light	D3-42
RWLSF – Semiflush Runway Edge Light	D3-43
SAFE1 – Lighted Safe Water Mark	D3-43
SAFE2 – Lighted Safe Water Mark	D3-43
SAFE3 – Lighted Safe Water Mark	D3-43
SCNRH – Section Corner Hatched	D3-43
SCNRO – Section Corner Open.....	D3-43
SCNRTO – Section Corner T Open....	D3-43
SDMHOL – Storm Drainage ManholeD3-43	
SECCUT – Typical Section Cut	D3-43
SFL – Sequenced Flasher Light	D3-44
SHRUBC – Shrub, Coniferous	D3-44
SIGBRG – Bridge Light Inc Traffic....	D3-44
SIGN – Sign	D3-44
SIGNWS – National Weather Service Station.....	D3-44
SIGSHO – Sub Signal Connect Shore D3-44	
SIGST1 – General Signal Station.....	D3-44
SIGST2 – General Signal Station.....	D3-44
SIGSTP – Port Control Signal Station D3-44	
SIGSUB – Submarine Signal	D3-45
SIRLH1 – Siren at Lighthouse	D3-45
SIRLH2 – Siren at Lighthouse	D3-45
SLARRL – Slope Arrow w/ Enter Data Field	D3-45
SLARRR – Slope Arrow w/ Enter Data Field	D3-45
SLLEX – Existing Street Light Luminaire	D3-45
SLREG – Constant Current Transformer	D3-45
SNMETR – Sanitary Meter.....	D3-45
SNMHOL – Sanitary Manhole	D3-45
SNPVSL – Sanitary Pressure Vessel...D3-46	
SNVALT – Sanitary Valve Vault	D3-46
SPAR1 – Spar Buoy Spindle Buoy....D3-46	
SPAR2 – Spar Buoy Spindle Buoy....D3-46	
SPARB – Black Spar Buoy.....D3-46	
SPARB – Black Spar Buoy w/Topmark	D3-46
SPARWT – White Spar Buoy w/Topmark	D3-46
SPH1 – Spherical Buoy	D3-46
SPH2 – Spherical Buoy.....D3-46	
SPHD – Diagonal Stripe Spherical Buoy	D3-47
SPHV – Vertical Stripe Spherical Buoy	D3-47
SPHW – White Spherical Buoy	D3-47
SPILE – Submerged Piling	D3-47
SPILE1 – Submerged Piles	D3-47
SPILES – Submerged Piles.....	D3-47
SPILEX – Submerged Pile w/Position D3-47	
SPOST – Submerged Post.....D3-47	
SPOSTX – Submerged Post w/Position	D3-47
SPTANK – Septic Tank.....	D3-48
SSLSTA – Sanitary Sewer Lift StationD3-48	
STAKE – Stake Perch.....	D3-48
STAKEX – Stake w/Position	D3-48
STHWY – State Highway Symbol.....	D3-48
STMPIT – Steam Pit	D3-48
STUMPS – Submerged Stumps	D3-48
SUBSTA – Substation	D3-48
SUPER – Super Buoy	D3-48
SUWEL2 – Suspended Well, Depth Unknown	D3-49
SUWEL3 – Suspended Well, Depth Unknown	D3-49
SUWELY – Suspended Well, Depth Known	D3-49
SWAMP – Swamp	D3-49
SWELB1 – Submerged Well w/Buoy. D3-49	
SWELB2 – Submerged Well w/Buoy. D3-49	
SWELL5 – Submerged Prod Well.....D3-49	
SWPADX – Existing Switch Pad	D3-49
TDZL – Touchdown Zone Light.....D3-49	
TELBBB – Black Telegraphic Barrel Buoy	D3-50
THL – Threshold Light	D3-50

TIDEG – Tide Gage.....	D3-50
TIDSTF – Tide Staff.....	D3-50
TIRETR – Tire Treddle.....	D3-50
TNKBG – Tank, Below Ground	D3-50
TNKHAG – Tank, Horizontal Above Ground	D3-50
TNKVAG – Tank, Vertical Above Ground	D3-50
TOW1 – Beacon Tower	D3-50
TOW2 – Beacon Tower	D3-51
TOW3 – Beacon Tower	D3-51
TOWB – Black Beacon Tower	D3-51
TOWBT1 – Black Beacon Tower w/Topmark	D3-51
TOWBT2 – Black Beacon Tower w/Topmark	D3-51
TOWER – Transmission Tower.....	D3-51
TOWW – White Beacon Tower.....	D3-51
TOWWT1 – White Beacon Tower w/Topmark	D3-51
TOWWT2 – White Beacon Tower w/Topmark	D3-51
TREEC – Tree, Coniferous	D3-52
TREED – Tree, Deciduous	D3-52
TREEG – Tree, Generic.....	D3-52
TRFSIG – Traffic Signal Mast Arm....	D3-52
TRIPNT – Triangulation Point.....	D3-52
TRVALT – Transformer Vault.	D3-52
TSCTRL – Traffic Signal Controller. .	D3-52
TSHEAD – Traffic Signal Head.	D3-52
TSPBX – Traffic Signal Pullbox.....	D3-52
TSPHS – Traffic Signal Phase No., Thru	D3-53
TSPHT – Traffic Signal Phase No., Turn	D3-53
TSVLDT – Traffic Signal Vehicle Loop Detector	D3-53
TWCLL – Taxiway Centerline Light..	D3-53
TWELEL – Elevated Taxiway End Light	D3-53
TWELSF – Semiflush Taxiway End Light	D3-53
TWGSGN – Taxiway Guidance Sign.	D3-53
TWLEL – Elevated Taxiway Edge Light	D3-53
TWLSF – Semiflush Taxiway Edge Light	D3-53
USHWY – US Highway Symbol	D3-54
UTPLX – Existing Pole	D3-54

VCDATA – Vertical Curve Data	D3-54
VERCPT – Vertical Control Point	D3-54
WAHHOL – Water Handhole.....	D3-54
WAMETR – Water Meter.....	D3-54
WAPLNT – Water Plant.....	D3-54
WASOFT – Water Softener	D3-54
WAVALT – Water Valve Vault	D3-54
WEIR – Weir	D3-55
WELL1 – Wellhead, Above Water	D3-55
WELL3 – Wellhead, Above Water	D3-55
WINDCN – Windcone.....	D3-55
WITHYP – Port Hand Withy	D3-55
WITHYS – Starboard Hand Withy	D3-55
WRECK – Wreck, Not Dangerous	D3-55
WRKDNG – Wreck, Danger Depth Unknown	D3-55
WRKEXP – Wreck, Partly Exposed...	D3-55
XFRPLX – Existing Transformer Pole	D3-56
XFRPMX – Existing Transformer Pad	D3-56

Geotechnical

Patterns

AGGLOM - Agglomerate or Flow Breccia.....	D4-3
ANDES – Andesite	D4-3
BASALT – Basalt	D4-3
BRECCA – Breccia	D4-3
CHALK – Chalk or Marl	D4-3
CHERT – Chert	D4-3
CLAYST – Claystone or Siltstone	D4-3
CMPSHL – Compaction Shale	D4-3
COAL – Coal	D4-3
CONGLM – Conglomerate	D4-4
CSHALE – Cemented Shale	D4-4
CSJNT – Closely Spaced Joints	D4-4
DIORIT – Diorite	D4-4
DOLOM – Dolomite	D4-4
GABBRO – Gabbro	D4-4
GNEISS – Gneiss	D4-4
GRANIT – Granite	D4-4
GRAYWC – Graywacke	D4-4
HFRACT – Highly Fractured	D4-5
LIMEST – Limestone	D4-5
MARBL1 – Marble	D4-5
MSJNT – Moderately Spaced Joints	D4-5
QUARTZ – Quartzite	D4-5

RHYOLT – Rhyolite.....	D4-5
SANDST – Sandstone.....	D4-5
SCHIST – Schist.....	D4-5
SHELL – Shells	D4-5
SLATE – Slate	D4-6
SOAPST – Soapstone or Serpentine	D4-6
TUFF – Tuff or Tuff Breccia	D4-6
USCS1 – USCS Soil Symbol.....	D4-6
USCS10 – OL, Organic Clay or Silt, Low Liquid Limit	D4-6
USCS11 – Pt, Peat	D4-6
USCS12 – SC, Clayey Sand.....	D4-6
USCS13 – SM, Silty Sand	D4-6
USCS14 – SP, Poorly Graded Sand.....	D4-6
USCS15 – SW, Well Graded Sand	D4-7
USCS2 – CL, Lean Clay	D4-7
USCS3 – GC, Clayey Gravel	D4-7
USCS4 – GM, Silty Gravel.....	D4-7
USCS5 – GP, Poorly Graded Gravel	D4-7
USCS6 – GW, Well Graded Gravel.....	D4-7
USCS7 – MH, Inorganic Silt, High Liquid Limit	D4-7
USCS8 – ML, Inorganic, Silt, Low Liquid Limit	D4-7
USCS9 – OH, Organic Clay or Silt, High Liquid Limit.....	D4-7
WOOD – Wood Symbol.....	D4-8
WSJNT – Widely Spaced Joints	D4-8
ZONECL – Zones of Core Loss.....	D4-8

Symbols

ANCHOL – Angle Cored Hole (Arrow=Dir)	D4-11
ANTICL – Anticline	D4-11
BHHNUM – Backhoe Hole Number ..	D4-11
BOLOGR – Boring Log Refusal.....	D4-11
CCHNUM – Concrete Core Hole Number	D4-11
CDRDSH – Consolidated-Drained Direct Shear.....	D4-11
CONDRA – Consolidated Drained....	D4-11
CONSOL – Consolidation	D4-11
CONTST – Consolidation Test.....	D4-11
CONUDR – Consolidated Undrained.	D4-12
CPNHOL – Cone Penetrometer Hole .	D4-12
CUDRTT – Consolidated-Undrained Triaxial Test	D4-12
DSCHOL – Drive Sampled (SPT) and Cored	D4-12
DSHOL – Drive Sample (SPT) Hole ..	D4-12
FBLCK1 – Fault Block Movement 1..	D4-12
FBLCK2 – Fault Block Movement 2 ..	D4-12
HAHNUM – Hand Auger Hole Number.....	D4-12
HANGF1 – High Angle Fault 1	D4-12
HANGF2 – High Angle Fault 2	D4-13
HDHNUM – Hand Dug Hole Number	D4-13
HEXAGN – Hexagon Symbol	D4-13
HOLNUM – Hole Number, Elevation, Offset	D4-13
HRZBED – Horizontal Beds.....	D4-13
MOISTC – Moisture Content.....	D4-13
NSAHOL – Nonsampled Area of Hole	D4-13
OBSHOL – Piezometer or Observation Hole.....	D4-13
OPBLOG – Open Boring Log.....	D4-13
PAHNUM – Power Auger Hole Number.....	D4-14
PIEZOM – Piezometer	D4-14
PROPEX – Proposed Exploration.....	D4-14
PTHNUM – Perc Test Hole Number ..	D4-14
RDHNUM – Rotary Drill Hole Number.....	D4-14
RSLASH – Refusal Slashes	D4-14
SAMPLE – Sample	D4-14
SDIJNT – Strike Dip of Inclined Joint	D4-14
SQUARE – Square Symbol	D4-14
STRKDP – Strike Dip	D4-15
STRKVJ – Strike of Vertical Joint.....	D4-15
STRKVP – Strike w/Vertical Dip	D4-15
SYNCLN – Syncline	D4-15
TRIANG – Triangle Symbol	D4-15
TSTHOL – Test Hole Symbol	D4-15
UCONUD – Unconsolidated Undrained	D4-15
UCONUT Unconsolidated-Undrained Triaxial Test	D4-15
UDENIS – Undisturbed Denison or Push	D4-15
ULIMIT – Unsatisfactory Limit	D4-16
VCHOL – Vertical Core Hole.....	D4-16
VHNUM – Vibracore Hole Number...	D4-16
WASHBR – Washbored	D4-16
WBHNUM – Wash Boring Hole	

Number.....	D4-16
WLEVDL – Water Level Date Left	D4-16
WTRLEV – Water Level	D4-16

Civil

Lines

BARDIT – Ditch Barrier.....	D5-3
BARDTB – Ditch and Berm Barrier.....	D5-3
BARGEN – Generic Security Barrier ...	D5-3
BARMAS – Security Masonry Barrier .	D5-3
CONLMT – Construction Limit	D5-3
CULVRT – Culvert Pipe.....	D5-3
DITCH – Ditch Line	D5-3
FENCE – Fence	D5-3
FIRE – Fire Protection Water Supply ...	D5-3
FUELOR – Fuel Oil Return.....	D5-4
FUELOS – Fuel Oil Supply.....	D5-4
FUELOV – Fuel Oil Tank Vent.....	D5-4
GOVTKL – Government Taking Line..	D5-4
GUARD – Guardrail	D5-4
IDXDC – Index Depth Contour	D5-4
IWASTE – Industrial Waste	D5-4
LIQPET – Liquid Petroleum Gas.....	D5-4
MINRDC – Minor Depth Contour	D5-4
NONPOT – Nonpotable Water	D5-5
NTGASN – Natural Gas Piping.....	D5-5
NTGASX – Exist. Natural Gas Piping..	D5-5
PROJBL – Project Boundary Line	D5-5
PROPL – Property Line	D5-5
RAILRD – Railroad	D5-5
RTOFWY – Right of Way	D5-5
SSWAF – Sanitary Sewer	D5-5
SSWAFX – Existing Sanitary Sewer	D5-5
STRAF – Storm Drain	D5-6
STRAFX – Existing Storm Drain	D5-6
TREEL – Tree Line	D5-6
WATERL – Water Line.....	D5-6
WATRX – Existing Water Line.....	D5-6
WWFBRC – Welded Wire Fabric	D5-6

Patterns

CONCST – Concrete, Stone	D5-9
FILTBD – Filtration Bed	D5-9
GRAVEL – Gravel	D5-9
LSWAMP – Large Swamp	D5-9

POROUS – Porous.....	D5-9
RIPRAP – Riprap.....	D5-9

Symbols

AIRFLD – Airfield Symbol	D5-13
ARRPT – Parking Turn Arrow	D5-13
ARRSD – Straight Direction Arrow ...	D5-13
ARRST – Straight and Turn Arrow	D5-13
BREAK – Break Line Symbol	D5-13
BUOY – Buoy.....	D5-13
CATBSN – Catch Basin	D5-13
CATBSR – Round Catch Basin	D5-13
CDHDR – Core Drill Hole Drilled ..	D5-13
CDHUDR – Core Drill Hole Undrilled	D5-14
CLNOUT – Cleanout.....	D5-14
CNR90 – Corner Solid 90.....	D5-14
CNRSF – Corner Solid Flat	D5-14
CNTLIN – Centerline Symbol	D5-14
COGRAV – Center of Gravity Symbol	D5-14
CULVEE – Culvert End	D5-14
DBLARR – Double Arrow Terminator	D5-14
DRLHOL – Drill Hole	D5-14
FLARRL – Flow Arrow Left in 0 Pt..	D5-15
FLARRR – Flow Arrow Right in 0 Pt.	D5-15
FOMETR – Fuel Oil Meter.....	D5-15
FOMHOL – Fuel Oil Manhole	D5-15
FOVALT – Fuel Oil Vault.....	D5-15
GREASE – Grease Trap	D5-15
GRITCH – Grit Chamber.....	D5-15
GSMETR – Gas Meter.....	D5-15
GSPLNT – Gas Plant	D5-15
GSRECR – Gas Receiver.....	D5-16
GSTRAP – Gas Trap	D5-16
GSVALT – Gas Valve Vault	D5-16
HEADWL – Headwall	D5-16
HNDCAP – Handicap Chair Symbol..	D5-16
HORCPT – Horizontal Control Point .	D5-16
HOVCPT – Horiz. Vert. Control Point	D5-16
HUREYE – Hurricane Eye	D5-16
HYDRNT – Hydrant.....	D5-16
INSHWY – Interstate Highway Symbol	D5-17
IWMETR – Industrial Waste Water Meter.....	D5-17
IWMHOL – Industrial Waste Water Manhole	D5-17
JNBX – Junction Box	D5-17
MONWEL – Monitoring Well.....	D5-17
PHOCPT – Photo Control Point	D5-17

PIINFO – PI Information	D5-17
PIVALV – Post Indicator Valve	D5-17
PMPSTA – Pump Station	D5-17
RGVALV – Regulator Valve.....	D5-18
RRSIGN – Rail Signal	D5-18
RRSWTC – Rail Switch	D5-18
SCNRH – Section Corner Hatched	D5-18
SCNRO – Section Corner Open.....	D5-18
SDMHOL – Storm Drainage Manhole	D5-18
SHRUBC – Shrub, Coniferous	D5-18
SHRUBD – Shrub, Deciduous.....	D5-18
SIGN – Sign.....	D5-18
SNMHOL – Sanitary Manhole	D5-19
SNPVSL – Sanitary Pressure Vessel...	D5-19
SNVALT – Sanitary Valve Vault	D5-19
SPOTEL – Ground Spot Elevation	D5-19
SPTANK – Septic Tank.....	D5-19
STHWY – State Highway Symbol.....	D5-19
STMPIT – Steam Pit.....	D5-19
SWAMP – Swamp.....	D5-19
TIDEG – Tide Gage.....	D5-19
TIRETR – Tire Treddle.....	D5-20
TNKBG – Tank, Below Ground	D5-20
TNKHAG – Tank, Horizontal Above Ground	D5-20
TNKVAG – Tank, Vertical Above Ground	D5-20
TRACR – Traffic Arm w/Card Reader	D5-20
TRAMS – Traffic Arm, Mechanical Swing	D5-20
TREEC – Tree, Coniferous	D5-20
TREED – Tree, Deciduous	D5-20
TREEG – Tree, Generic.....	D5-20
USHWY – US Highway Symbol	D5-21
VCDATA – Vertical Curve Data.....	D5-21
VERCPT – Vertical Control Point.....	D5-21
WAHHOL – Water Handhole.....	D5-21
WAMETR – Water Meter.....	D5-21
WAPLNT – Water Plant.....	D5-21
WASOFT – Water Softener.....	D5-21
WAVALT – Water Valve Vault	D5-21

Landscape

Lines

FENCE – Fence Line	D6-3
LAWNSP – Lawn Sprinkler Supply	D6-3
TREEL – Tree Line	D6-3

Symbols

SHRUBC – Shrub, Coniferous	D6-7
SHRUBD – Shrub, Deciduous.....	D6-7
TREEC – Tree, Coniferous.....	D6-7
TREED – Tree, Deciduous	D6-7
TREEG – Tree, Generic.....	D6-7

Structural

Lines

BERM – Berm	D7-3
CMP127 – CMP 127 mm x 25 mm	D7-3
CMP152 – CMP 152 mm x 51 mm	D7-3
CMP38 – CMP 38 mm x 6 mm	D7-3
CMP51 – CMP 51 mm x 13 mm	D7-3
CMP68 – CMP 68 mm x 13 mm	D7-3
CMP76 – CMP 76 mm x 25 mm	D7-3
DECKCR – Corrugated Metal Deck.....	D7-3
DECKFL – Metal Floor Deck.....	D7-3
DECKRF – Metal Roof Deck	D7-4
GROUND – Ground	D7-4
INTRLK – Interlocking Steel Members	D7-4
PS31 – PS31 Sheet Pile	D7-4
PS31H – PS31 Sheet Pile Hidden.....	D7-4
PSA23 – PSA23 Sheet Pile.....	D7-4
PSA23H – PSA23 Sheet Pile Hidden ...	D7-4
PZ22 – PZ22 Sheet Pile	D7-4
PZ22H – PZ22 Sheet Pile Hidden.....	D7-4
PZ27 – PZ27 Sheet Pile	D7-5
PZ27H – PZ27H Sheet Pile Hidden.....	D7-5
PZ35 – PZ35 Sheet Pile	D7-5
PZ35H – PZ35 Sheet Pile Hidden.....	D7-5
PZ40 – PZ40 Sheet Pile	D7-5
PZ40H – PZ40 Sheet Pile Hidden.....	D7-5
REBR12 – Rebar at 12 Inch.....	D7-5
REBR18 – Rebar at 18 Inch.....	D7-5
REBR6 – Rebar at 6 Inch.....	D7-5

REBR9 – Rebar at 9 Inch.....	D7-6
RIPPLN – Riprap Plan View	D7-6
ROCK – Rock	D7-6
SHORLN – Shore Line	D7-6
WWFBRC – Welded Wire Fabric	D7-6

Objects

4FRB – 4" Flat Ribbed Waterstop	D7-9
6FRBHD – 6" Flat Ribbed Waterstop, Heavy Duty.....	D7-9
6FRBLW – 6" Flat Ribbed Waterstop, Light Weight.....	D7-9
6RCBHD – 6"Ribbed Waterstop with Center Bulb, Heavy Duty	D7-9
6RCBLW – 6" Ribbed Waterstop with Center Bulb, Light Weight	D7-9
9FLBHD – 9" Flat Ribbed Waterstop Heavy Duty.....	D7-9
9FRBLW – 9" Flat Ribbed Waterstop Light Weight.....	D7-9
9RCBHD – 9" Ribbed Waterstop with Center Bulb, Heavy Duty	D7-9
9RCBLW – 9" Ribbed Waterstop with Center Bulb, Light Weight	D7-9
BOX – Box Pile	D7-10
CMUFL – Fluted Concrete Block, 8 X 8 X 16.....	D7-10
CMURIB – Ribbed Concrete Block, 8 X 8 X 16	D7-10
CMUSF – Split Face Concrete Block, 8 X 8 X 16	D7-10
CMUSTR – Structural Concrete Block, 8 X 8 X 16	D7-10
PLZ23 – PLZ23 Sheet Piling	D7-10
PLZ25 – PLZ25 Sheet Piling	D7-10
PS27.5 – PS27.5 Sheet Pile	D7-10
PS31 – PS31 Sheet Pile	D7-10
PSA23 – PSA23 Sheet Pile	D7-11
PZ22 – PZ22 Sheet Pile	D7-11
PZ27 – PZ27 Sheet Pile	D7-11
PZ35 – PZ35 Sheet Pile	D7-11
PZ40 – PZ40 Sheet Pile	D7-11
RC230 – RC230 Sheet Pile Connection	D7-11
RC231 – RC231 Sheet Pile Connection	D7-11
ZC270 – PZ22 PZ27 L Connection	D7-11
ZC271 – PZ22 PZ27 L Connection	D7-11
ZC272 – PZ22 PZ27 L Connection	D7-12
ZC273 – PZ22 PZ27 L Connection	D7-12

ZC274 – PZ22 PZ27 L Connection	D7-12
ZC275 – PZ22 PZ27 L Connection	D7-12
ZC276 – PZ22 PZ27 L Connection	D7-12
ZC277 – PZ22 PZ27 L Connection	D7-12
ZC278 – PZ22 PZ27 L Connection	D7-12
ZC279 – PZ22 PZ27 L Connection	D7-12
ZC350 – PZ35 PZ40 L Connection	D7-12
ZC351 – PZ35 PZ40 L Connection	D7-13
ZC352 – PZ35 PZ40 L Connection	D7-13
ZC353 – PZ35 PZ40 L Connection	D7-13
ZC354 – PZ35 PZ40 L Connection	D7-13
ZC355 – PZ35 PZ40 L Connection	D7-13
ZC356 – PZ35 PZ40 L Connection	D7-13
ZC357 – PZ35 PZ40 L Connection	D7-13
ZC358 – PZ35 PZ40 L Connection	D7-13
ZC359 – PZ35 PZ40 L Connection	D7-13
ZT270 – PZ22 PZ27 T Connection....	D7-14
ZT271 – PZ22 PZ27 T Connection....	D7-14
ZT350 – PZ35 PZ40 T Connection....	D7-14
ZT351 – PZ35 PZ40 T Connection....	D7-14
ZX270 – PZ22 PZ27 Cross Connection	D7-14
ZX350 – PZ35 PZ40 Cross Connection	D7-14

Patterns

CONCST – Concrete, Stone	D7-17
EEARTH – Existing Earth.....	D7-17
GRAVEL – Gravel	D7-17

Symbols

ANBOLT – Anchor Bolt.....	D7-21
CNTLIN – Centerline Symbol	D7-21
COLLIN – Column Line/Grid Indicator	D7-21
JSTBR1 – Joist Bar, Single Line.....	D7-21
JSTBR2 – Joist Bar, Single Line.....	D7-21
PLATE – Plate Symbol	D7-21

Architectural

Lines

INBATT – Loose Fill Batt. Insulation ..	D8-3
WWFBRC – Welded Wire Fabric	D8-3

Objects

BRKGL – Glazed Brick.....	D8-7
CMU – Masonry Unit	D8-7
CMUBLK – Concrete Block, 8X8X16.	D8-7
CMUCOR – Concrete Block, 8X8X16 Corner	D8-7
CMUEND – Concrete Block, 8X8X16 End.....	D8-7
CMUGL – Glazed Concrete Block	D8-7
CMUSTR – Concrete Block, 8X8X16 Str.	D8-7
DOR18L – Left Door, 180 Degree Swing.....	D8-7
DOR18R – Right Door, 180 Degree Swing.....	D8-7
DORBFL – Left Bifold Door	D8-8
DORBFR – Right Bifold Door	D8-8
DORCPV – Door Center Pivot	D8-8
DORCYL – Cylindrical Door	D8-8
DORDBL – Left Double Door.....	D8-8
DORDBR – Right Double Door	D8-8
DORDEL – Left Double Egress Door ..	D8-8
DORDER – Right Double Egress Door	D8-8
DORFSL – Left Single Full Swing Door.....	D8-8
DORFSR – Right Single Full Swing Door.....	D8-9
DOROVH – Overhead Door.....	D8-9
DORPOC – Door Pocket	D8-9
DORRUP – Roll Up Door	D8-9
DORSHL – Left Single Hinged Door..	D8-9
DORSHR – Right Single Hinged Door.	D8-9
DORSLD – Sliding Door.....	D8-9
DORSLS – Sliding Surface Door	D8-9
DORSPL – Left Single Pivot Door ..	D8-9
DORSPR – Right Single Pivot Door...	D8-10
DORUDL – Left Uneven Double Door	D8-10
DORUDR – Right Uneven Dbl. Door	D8-10
LINTEL – Concrete Beam Bond Lintel	D8-10
WINAWN – Window Awning.....	D8-10
WINBAY – Projected Bay Window ...	D8-10
WINBOW – Projected Bow Window .	D8-10
WINBOX – Projected Box Window...	D8-10
WINDCI – Window Double Casement Inward Open	D8-10
WINDCO – Window Double	

Casement Outward Open.....	D8-11
WINDH – Double Hung Window.....	D8-11
WINFIX – Fixed 1 Foot Window	D8-11
WINJAL – Jalousie Window	D8-11
WINOSL – Sliding Window Left Operating Sash	D8-11
WINOSR – Sliding Window Right Operating Sash	D8-11
WINPIV – Pivot Window	D8-11
WINSCL – Window Single Casement Left Jamb Hinge	D8-11
WINSCR – Window Single Casement Right Jamb Hinge	D8-11
WINSH – Single Hung Window.....	D8-12

Patterns

ADOBED – Masonry/Adobe Rammed Earth	D8-15
ALUMIN – Aluminum	D8-15
ASHLER – Stone Ashler	D8-15
BRASS – Bronze Brass.....	D8-15
BRBLCO – Coursed Brick Block.	D8-15
BRCOBD – Common Bond Brick.....	D8-15
BRENBD – English Bond Brick.....	D8-15
BRFLBD – Flemish Bond Brick.....	D8-15
BRFLCB – Flemish Common Bond ...	D8-15
BRKCF – Common/Face Brick	D8-16
BRKELE – Brick Elevation	D8-16
BRRNBD – Brick Running Bond.....	D8-16
BRSTBD – Brick Stack Bond.....	D8-16
CCBSS – Cast Concrete Block, Small Scale	D8-16
CCELEV – Concrete Cement Elevation.....	D8-16
CDTOP – Cementitious Deck & Topping	D8-16
CMUBP – CMU Block	D8-16
CMUELB – Elevation Block	D8-16
CONBLK – Concrete Block	D8-17
CONCCN – Concrete, Cinder.....	D8-17
CONCLW – Concrete, Light Weight..	D8-17
CONCPR – Precast Cast-in-Place Concrete.....	D8-17
CONCST – Concrete, Stone	D8-17
CONPBS – Pumice Block Concrete, Small Scale	D8-17
CSTIRN – Cast Iron.....	D8-17

CSTSTN – Cast Stone	D8-17
CTILSS – Ceramic Tile, Small Scale..	D8-17
CUTSTN – Cut Stone	D8-18
EARTH – Compacted Fill Earthwork.	D8-18
FIBFSF – Fibrous Fire Safing.....	D8-18
GLASS – Structural Glass	D8-18
GROUT – Grout	D8-18
GRVCRE – Crushed Rock Earth Gravel	D8-18
GRVPFE – Porous Fill Gravel Earthwork	D8-18
GRVSCL – Sand Clay Gravel.....	D8-18
GYPPPE – Gypsum Plaster Plan & Elevation.....	D8-18
INSQLT – Large Scale Insulation Quilts	D8-19
INSRIG – Rigid Insulation.....	D8-19
INSSCM – Solid Cork Magnesia Insulation	D8-19
MARBL2 – Marble Stone	D8-19
RIPRAP – Riprap.....	D8-19
ROCK – Rock Earthwork	D8-19
RUBBLE – Stone Rubble	D8-19
SAND – Sand	D8-19
STEEL – Steel and other Metals.....	D8-19
STNSQR – Squared Stone	D8-20
TCBCSS – Terra Cotta (Small Scale) Brick Cotta	D8-20
TCELEV – Terra Cotta Elevation.....	D8-20
TCUSS – Terra Cotta (Small Scale) Unglazed.....	D8-20
TERRZO – Terrazzo.....	D8-20
TILCER – Ceramic Tile Elevation.....	D8-20
TILESF – Structural Facing Tile.....	D8-20

Symbols

ARCPBW – Architectural Particleboard Woodwork	D8-23
ASBDLS – Large Scale Asbestos Board	D8-23
ASBDSS – Small Scale Asbestos Board	D8-23
BATHCO – Corner Bath	D8-23
BATHEM – Emergency Bath	D8-23
BATHFT – Foot Bath	D8-23
BATHHA – Hydrotherapy Arm Bath .	D8-23
BATHHH – Hydrotherapy Hubbard Bath	D8-23

BATHHL – Hydrotherapy Leg Bath...	D8-23
BATHIF – Infant Bath	D8-24
BATHIN – Institutional Bath.....	D8-24
BATHRC – Recessed Bath	D8-24
BATHRR – Roll Rim Bath	D8-24
BATHSZ – Sitz Bath	D8-24
BATHWP – Whirlpool Bath.....	D8-24
BIDET – Watercloset Bidet	D8-24
BRFACC – Brick Face on Common...	D8-24
BRFIRE – Fire Brick	D8-24
BSSFLG – Bluestone / Slate / Soapstone / Flagging	D8-25
CANWCT – Can Washer, Cabinet Type	D8-25
CANWDT – Can Washer, Dish Type.	D8-25
CARPET – Carpet and Pad.....	D8-25
CPLANK – Concrete Plank	D8-25
DFPROJ – Drinking Fountain, Projecting Type	D8-25
DFRECS – Drinking Fountain, Recessed Type	D8-25
DFSREC – Drinking Fountain, Semi-Recessed Type.....	D8-25
DOORID – Door Opening Identifier...	D8-25
DSHWSH – Commercial Dishwasher	D8-26
EQPMID – Equipment Identifier	D8-26
FASTEN – Fastener	D8-26
FLRRPL – Flooring, Resilient Plastic Laminate	D8-26
FURCHH – Furring Channel Hat	D8-26
FURCHN – Furring Channel	D8-26
GLASLS – Large Scale Glass.....	D8-26
GLASSS – Small Scale Glass	D8-26
LBLLLS –Glass Block, Large Scale...	D8-26
GLBLSS –Glass Block, Small Scale...	D8-27
GLELEV – Glass Elevation	D8-27
GPLANK – Gypsum Plank.....	D8-27
GYPBLK – Gypsum Block.....	D8-27
GYPPOM – Gypsum Plaster on Masonry	D8-27
GYPPPB – Gypsum Plaster Particle Board	D8-27
GYPSPP – Gypsum Solid Plaster Partition	D8-27
GYPWBD – Gypsum Wallboard Finishes.....	D8-27
INFBS – Small Scale Flexible Blanket Insulation.....	D8-27

INLFLS – Large Scale Loose Fill	D8-32
Insulation	D8-28
INS1RM – Insulation, Reflective Metal	
On 1 Side.....	D8-28
INS2RM – Insulation, Reflective	
Curtain 2 Sides (Sm. Scale).....	D8-28
INSFOM – Spray Foam Insulation	D8-28
INSTND – Insulation, Type Not	
Determined (Lg. Scale).....	D8-28
LAVBCK – Back Lavatory.....	D8-28
LAVCOR – Corner Lavatory	D8-28
LAVCOU – Lavatory in Counter.....	D8-28
LAVDNT – Dental Lavatory	D8-28
LAVHND – Handicapped Lavatory....	D8-29
LAVMDM – Med. Manicure Lavatory	D8-29
LAVSLB – Slab Type Lavatory.....	D8-29
MTLLPL – Metal Lath and Plaster	D8-29
MTLSHT – Metal Sheet and all Metals	
(Small Scale)	D8-29
ORISTB – Oriented Strand Board	D8-29
PARTBD – Particleboard.....	D8-29
PLASTC – Plastic Finishes.....	D8-29
PLPLSS – Large Scale Plastic on	
Plywood.....	D8-29
PLPLSS – Small Scale Plastic on	
Plywood.....	D8-30
PLYWLS – Large Scale Plywood.....	D8-30
PLYWSS – Small Scale Plywood	D8-30
RBIILS – Rigid Board on	
Interior Insulation, Large Scale....	D8-30
RBISLS – Insulation, Rigid Board	
as Sheathing (Lg. Scale)	D8-30
ROOMID – Room Identifier	D8-30
SDIRLD – Stair Direction Line Down	D8-30
SDIRLU – Stair Direction Line Up....	D8-30
SHWRCO – Corner Shower	D8-30
SHWRHD – Shower Head.....	D8-31
SHWROG – Shower Overhead Gang .	D8-31
SHWRPG – Shower Pedestal Gang	D8-31
SHWRST – Shower Stall.....	D8-31
SLOPE – Direction of Line Slope.....	D8-31
SNK2BD – Double Bowl Sink	D8-31
SNK2CT – Two Compartment Sink ...	D8-31
SNKCWT – Circular Wash Type Sink	D8-31
SNKDSP – Sink Disposer.....	D8-31
SNKFRC – Flushing Rim	
Clinical Sink	D8-32
SNKGEN – General Sink	D8-32
SNKKLR – Kitchen Sink.....	D8-32
SNKLDB – Sink w/Left Drainboard...	D8-32
SNKLTR – Sink Laundry Tray	D8-32
SNKSCW – Semi-Circular Wash Sink	D8-32
SNKSLP – Slop-Type Sink.....	D8-32
SNKSrv – Service Sink.....	D8-32
SNKSSC – Surgeon Scrub Sink.....	D8-32
STLCSS – Structural Clay Tile,	
Small Scale	D8-33
SUSPNT – Suspension Tee	D8-33
TC1FLS – Terra Cotta Glazed	
1 Face (Large Scale)	D8-33
TC2FSS – Terra Cotta Glazed	
2 Faces (Small Scale)	D8-33
TCHOLW – Hollow Terra Cotta	D8-33
TCLS – Large Scale Terra Cotta.....	D8-33
TCQLS – Terra Cotta Quarry.....	D8-33
TCUGLS – Terra Cotta Unglazed	
(Large Scale)	D8-33
TCVENR – Veneer Terra Cotta.....	D8-33
THRSHD – Threshold	D8-34
TILFSS – Small Scale Tile Facing.....	D8-34
TILGSC – Glazed Structural Clay	
Tile Masonry	D8-34
TILSFU – Tile Structural Floor Units.	D8-34
TLACOU – Acoustical Tile Finishes..	D8-34
TLCRLS – Ceramic Tile Finish	
Large Scale	D8-34
TRAY1L – Single Laundry Tray	D8-34
TRAY2L – Double Laundry Trays	D8-34
URNLCO – Corner Type Urinal.....	D8-34
URNLPD – Pedestal Type Urinal	D8-35
URNLST – Urinal Stall.....	D8-35
URNLTR – Trough Type Urinal.....	D8-35
URNLWH – Wall Hung Urinal	D8-35
WALLID – Wall Type Identifier	D8-35
WCELWH – Electric Wall Hung	
Water Cooler	D8-35
WCFVFO – FV Flr Outlet Watercloset	D8-35
WCFVWH – FV WH Watercloset.....	D8-35
WCITNK – Integral Tank Watercloset	D8-35
WCTANK – Tank Type Watercloset..	D8-36
WCWHTN – WH Tank Watercloset ..	D8-36
WDFLBD – Wood Floor Board.....	D8-36
WDFNOS – Wood Finish on Studs	D8-36
WDFRAM – Continuous Wood	
Framing	D8-36
WDSHSD – Wood Shingles Siding....	D8-36

WFINSH – Wood Finish.....	D8-36
WINID – Window Identifier	D8-36
WOODHB – Hardboard Wood.....	D8-36
WSHRBP – Bedpan Washer.....	D8-37
WTRPFF – Waterproofing Felt Flashing	D8-37

Interiors

Objects

ABLLBD – Bulletin Board	D9-3
ACOSTM – Costumer	D9-3
ADDCAB – Double Door Cabinet	D9-3
AEAS30 – Easel, 30W (Hidden)	D9-3
AMAG15 – Magazine Rack, 15W X 3D	D9-3
AMAGLT – Magnifying Light	D9-3
APRJSC – Projection Screen, Ceiling-Mounted.....	D9-3
ASTCAB – Storage Cabinet	D9-3
D65CLR – Desk 65 Comp LR	D9-3
D65CRR – Desk 65 Comp RR	D9-4
D7230L – L.H. Single Pedestal Desk, 72W X 30D (2).....	D9-4
D7230R – R.H. Single Pedestal Desk, 72W X 30D (2).....	D9-4
DPFF – Desk, Double File Pedestal.....	D9-4
DPFL – Desk, Left Pedestal.....	D9-4
DPFR – Desk Return Pedestal File	D9-4
DSC1 – Desk, Study Carrel, Single	D9-4
ECGAME – Freestanding Computer Game	D9-4
EOMCN – Comsec Container	D9-4
EDRYER – Dryer	D9-5
EPINBL – Pinball Machine	D9-5
EREFRG – Refrigerator.....	D9-5
ETV – Television.....	D9-5
EVEND – Vending Machine	D9-5
EWASHM – Washing Machine.....	D9-5
F4DL – Lateral File Cab-4 Drawer	D9-5
FC3618 – Storage Cabinet, 36W X 18D	D9-5
FE7422 –Equip. Shelving, 74W X 22D, Barracks.....	D9-5
FV1833 – Vertical File, 18W X 33D....	D9-6
GIDIR – Directory	D9-6
GIIS1 – Identification Sign w/1 Slot.....	D9-6

GIIS2 – Identification Sign w/2 Slots ...	D9-6
GIPIC1 – Pictogram 1	D9-6
GIPIC2 – Pictogram 2	D9-6
GMAN – Man Symbol for Restroom Signage	D9-6
GWOMAN – Woman Symbol for Restroom Signage	D9-6
SDMGT – Management Chair w/Arms 24W X 22D	D9-6
SDSEC – Secretarial Chair w/out Arms, 23W X 22D.....	D9-7
SDTASK – Task Chair	D9-7
SGANG – Gang Seating w/Table	D9-7
SSOF37 – Sofa Chair, 37W X 34D	D9-7
SSOF63 – 2 Cushion Sofa, 63W X 34D	D9-7
SSOF82 – 3 Cushion Sofa, 82.5W X 34D	D9-7
STAB24 – Chair Tablet Arm, 24W X 24D	D9-7
T42SQ – Table, 42SQ w/ Armless Chairs	D9-7
TMS30 – Mailsort Table 16 OH Slots 30W	D9-7
TPOOL – Pool Table	D9-8
TROUND – Round Table	D9-8
W7230L – Workstation L Unit LR	D9-8
W7230R – Workstation L Unit RR.....	D9-8
WCPDSK – Desk, Computer.....	D9-8
WFLIPR – Flipper Door Unit	D9-8
WLIGHT – Workstation Light.....	D9-8
WPED – Workstation Pedestal	D9-8

Symbols

ACURTN – Curtain	D9-11
APLANT – Artificial Plant	D9-11
GHNDPC – Universal Handicap Symbol.....	D9-11
GIID – Identification Sign.....	D9-11
MFMATL – Furniture Material List ...	D9-11
MFSCHD – Furniture Schedule.....	D9-11
MFSYMB – Furniture Symbol	D9-11
MNORTH – North Arrow.....	D9-11
MRSCHD – Room Finish Schedule ...	D9-11
MSSCHD – Signage Schedule.....	D9-12

Fire Protection

Lines

FIRE – Fire Protection Water Supply ..D10-3
MANSUC – Suction Main.....D10-3
SPRINK – Main Supply Sprinkler.....D10-3
STDCOM – Standpipe Combination ..D10-3
STDDRY – Dry StandpipeD10-3
STDWET – Wet Standpipe.....D10-3

Symbols

1DIR – Direction ArrowD10-7
ABORT – Abort Switch.....D10-7
ACCESS – Fire Department Access ...D10-7
AGSTCN – Agent Storage Container.D10-7
BELLFA – Bell (Gong)D10-7
BOILER – BoilerD10-7
CHIMNY – Chimney.....D10-7
CO2AA – CO2 Automatically Actuated
Extinguishing SystemD10-7
CO2MA – CO2 Manually Actuated
Extinguishing SystemD10-7
CONSFS – Freestanding Siamese Fire
Department Connection.....D10-8
CONSIA – Siamese Fire Department
Connection.....D10-8
CONSNG – Single Fire Department
Connection.....D10-8
CPESR – Elevator Status/RecallD10-8
CPFAC – Fire Alarm Communicator..D10-8
CPFCP – Fire Alarm Control PanelD10-8
CPFSA – Fire System AnnunciatorD10-8
CPFTR – Fire Alarm Transponder or
TransmitterD10-8
CPHCP – Halon Control PanelD10-8
CPHVA – Control Panel for HVAC ...D10-9
DCATAA – All-Type Fire Extinguisher,
Automatically Actuated.D10-9
DCATMA – All-Type Fire Extinguisher,
Manually ActuatedD10-9
DCEABC – Dry Chemical Extinguisher
(ABC-Type).....D10-9
DCEBC – Dry Chemical Extinguisher
(BC-Type).....D10-9
DCECO2 – CO2 ExtinguisherD10-9
DCEHLN – Halon or Clean Agent

Extinguisher.....	D10-9
DCLGAA – Dry Chemical System Auto Act. (Liquid, Gas, Elec. Fires)	D10-9
DCLGMA – Dry Chemical System Man Act. (Liquid, Gas, Elec. Fires)	D10-9
DMPBAR – Barometric Damper	D10-10
DMPFIR – Fire Damper	D10-10
DMPFS – Fire/Smoke Damper	D10-10
DMPSMK – Smoke Damper	D10-10
DRHOLD – Door Holder.....	D10-10
DTFLAM – Flame Detector.....	D10-10
DTFLOW – Flow Detector/Switch ...	D10-10
DTGAS – Gas Detector	D10-10
DTLEVL – Level Detector/Switch ...	D10-10
DTPRES – Pressure Detector/ Switch.....	D10-11
DTTAMP – Tamper Detector	D10-11
ELBP1L – 1-Lamp Emergency Light, Battery Powered	D10-11
ELBP2L – 2-Lamp Emergency Light, Battery Powered	D10-11
ELBP3L – 3-Lamp Emergency Light, Battery Powered	D10-11
EPSTA – Emergency Phone Station .	D10-11
ESCAPE – Fire Escape	D10-11
EXFOAM – Foam Extinguisher	D10-11
EXITCM – Ceiling Mounted Exit Sign Light	D10-11
EXITLF – Exit Sign, Lighted Face ...	D10-12
EXITWM – Wall Mounted Exit Sign Light	D10-12
FDOR3 – 3-Hour Rated Fire Door in Wall	D10-12
FDORL3 – Wall w/<3-Hour Rated Door	D10-12
FPDRIV – Fire Pump w/Drives	D10-12
FPFREE – Free Standing Test Header	D10-13
FPTEST – Wall-Mtd. Test Header....	D10-13
FRR1HR – 1-Hour Fire Resistance Rating	D10-13
FRR2HR – 2-Hour Fire Resistance Rating	D10-13
FRR30 – 30 Minute Fire Resistance Rating	D10-13

FRR3HR – 3-Hour Fire Resistance	
Rating	D10-13
FRR45 – 45 Minute Fire Resistance	
Rating	D10-13
FRR4HR – 4-Hour Fire Resistance	
Rating	D10-13
FULLSS – Fully Sprinklered Space..	D10-13
HD – Heat Detector.....	D10-14
HLNAA – Automatically Actuated Halon Extinguishing System.....	D10-14
HLNMA – Manually Actuated Halon Extinguishing System.....	D10-14
HOSECS – Hose Station, Charged Standpipe.....	D10-14
HOSEDS – Hose Station, Dry Standpipe.....	D10-14
HRN1A – Horn w/Light, One Assembly	D10-14
HRNMIN – Mini Horn	D10-14
HRNSA – Horn w/Light, Separate Assembly.....	D10-14
HRNSPK – Speaker/Horn (Electric Horn).....	D10-14
HYDPR1 – Private Hydrant, One-Hose Outlet.....	D10-15
HYDPR2 – Private Housed Hydrant, Two-Hose Outlets.....	D10-15
HYDPU2 – Public Hydrant, Two-Hose Outlets.....	D10-15
HYDPUP – Public Hydrant, Two-Hose Outlets, Pumper Connection	D10-15
HYDW2H – Wall Hydrant, Two-Hose Outlets.....	D10-15
LITFAS – Light	D10-15
MANSTA – Manual Station	D10-15
METRFP – Meter	D10-15
MNCHRG – Monitor Nozzle, Charged	D10-15
MNDRY – Monitor Nozzle, Dry	D10-16
NONSS – Non-Sprinklered Space	D10-16
PARTSS – Partially Sprinklered Space	D10-16
PURGE – Manual Purge Control.....	D10-16
RISER – Riser.....	D10-16
RSCO2 – CO2 Reel Station.....	D10-16
RSDRYC – Dry Chemical Reel Station	D10-16
RSFOAM – Foam Reel Station.....	D10-16
SD –Smoke Detector.....	D10-16
SHGARD – Sprinkler Head w/Guard	D10-17
SHNUU – Nippled Up Upright Sprinkler Head.....	D10-17
SHOUT – Outside Sprinkler Head....	D10-17
SHPEND – Pendent Sprinkler Head .	D10-17
SHPNDN – Pendent Sprinkler Head, on Drop Nipple.....	D10-17
SHSIDE – Sidewall Sprinkler Head..	D10-17
SHUPRT – Upright Sprinkler Head..	D10-17
SMKBAR – Smoke Barrier	D10-17
SSNOZZ – Special Spray Nozzle	D10-17
THRUST – Thrust Block	D10-18
TNKBG – Tank, Below Ground	D10-18
TNKHAG – Tank, Horizontal Above Ground	D10-18
TNKVAG – Tank, Vertical Above Ground	D10-18
VLVCHA – Alarm Check Valve	D10-18
VLVCHK – Check Valve	D10-18
VLVDEL – Deluge Valve.....	D10-18
VLVDRY – Dry Pipe Valve	D10-18
VLVIBF – Indicating Butterfly Valve	D10-18
VLVKEY – Key-Operated Valve	D10-19
VLVNON – Nonindicating Valve (Nonrising Stem)	D10-19
VLVOSY – OS&Y Valve.....	D10-19
VLVPI – Post Indicator Valve	D10-19
VLVPIT – Valve in Pit	D10-19
VLVPRE – Preaction Valve.....	D10-19
VLVQOD – Dry Pipe Valve, w/Quick Opening Device	D10-19
VLVTDS – Valve w/ Tamper Detector/Switch	D10-19
VNTOPN – Ventilation Openings	D10-19
WALARM – Water Motor Alarm....	D10-20
WATRSS – Water Spray System.....	D10-20
WBDSMA – Water-Based Dry System Manually Actuated	D10-20
WBDSSA – Water-Based Dry System Automatically Actuated	D10-20
WBFSA – Water-Based Foam System Automatically Actuated	D10-20
WBFMSA – Water-Based Foam System Manually Actuated	D10-20
WBWSAA – Water-Based Wet System, Automatically Actuated	D10-20
WBWSMA – Water-Based Wet System, Manually Actuated	D10-20

Plumbing

Lines

CDRNAF – Condensate Drain.....	D11-3
CLDWTR – Potable Cold Water	D11-3
CMPAIR – Compressed Air	D11-3
DIOWTR – Deionized Water.....	D11-3
DSTWTR – Distilled Water.....	D11-3
FIRE – Fire Protection Water Supply .	D11-3
FUELOR – Fuel Oil Return.....	D11-3
FUELOS – Fuel Oil Supply.....	D11-3
FUELOV – Fuel Oil Tank Vent.....	D11-3
HELIUM – Helium	D11-4
HWTR – Potable Hot Water	D11-4
HWTRR – Potable Hot Water Return.	D11-4
HYDRGN – Hydrogen.....	D11-4
ICWTR – Industrial Cold Water	D11-4
IHWTRR – Industrial Hot Water Return	D11-4
IHWTRS – Industrial Hot Water Supply.....	D11-4
INDDRN – Indirect Drain.....	D11-4
LIQNIT – Liquid Nitrogen.....	D11-4
LIQOXY – Liquid Oxygen	D11-5
LIQPET – Liquid Petroleum Gas.....	D11-5
NITOXI – Nitrous Oxide	D11-5
NITROG – Nitrogen	D11-5
NONPOT – Nonpotable Water	D11-5
NTGASN – Natural Gas Piping.....	D11-5
OXYGEN – Oxygen	D11-5
PNTUBE – Pneumatic Tube Runs.....	D11-5
ROOFDN – Roof Drain	D11-5
SFCWTR – Soft Cold Water	D11-6
SHWTRR – Sanitizing Hot Water Return (180F)	D11-6
SHWTRS – Sanitizing Hot Water Supply (180F).....	D11-6
SSWAF – Sanitary Sewer	D11-6
STRAF – Storm Drain	D11-6
VACAIR – Vacuum Air	D11-6
VENT – Vent.....	D11-6
VENTWS – Vent and Waste Combination	D11-6

Symbols

CAPSC – Cap	D11-9
DRNFUN – Open Drain Funnel	D11-9
EL45SC – 45 Degree Elbow	D11-9
EL90SC – 90 Degree Elbow	D11-9
ELBSC – Base Elbow	D11-9
ELDBSC – Double Branch Elbow.....	D11-9
ELLRSC – Long Radius Elbow	D11-9
ELODSC – Side Outlet Elbow, Outlet Down	D11-9
ELOUSC – Side Outlet Elbow, Outlet Up	D11-9
ELSTRT – Street Elbow	D11-10
ELTDSC – Turned Down Elbow.....	D11-10
ELTUSC – Turned Up Elbow.....	D11-10
FCO – Floor Cleanout.....	D11-10
FDCO – Floor Drain with Cleanout..	D11-10
FDDT – Floor Drain with Deep Trap	D11-10
FDNT – Floor Drain with No Trap ...	D11-10
FDTP – Floor Drain with Trap Prime	D11-10
FDWT – Floor Drain with Trap	D11-10
FLBLND – Blind Flange	D11-11
FLOW3 – Flow Arrow.....	D11-11
FLRPEN – Iso. Floor Penetration	D11-11
GAUGE – Gauge	D11-11
HANGRD – Hanger Rod	D11-11
HANGSP – Hanger Spring	D11-11
ISOEWC – Isometric EWC.....	D11-11
ISOLAV – Isometric Lavatories.....	D11-11
ISOMOP – Isometric Mop Sink.....	D11-11
ISOUR1 – Isometric Wall Mounted Urinals	D11-12
ISOWC1 – Isometric Floor Mounted Water Closet	D11-12
ISOWC2 – Isometric Wall Mounted Water Closet	D11-12
LOOPL – Left Dimension Loop	D11-12
LOOPR – Right Dimension Loop.....	D11-12
PLGBFL – Bull Plug, Flanged.....	D11-12
PLGPSC – Pipe Plug	D11-12
PRGGCO – Pressure Gauge and Cock	D11-12
PUMP – Pump	D11-12
PUMPP – Pump (Schematic)	D11-13
PUMPS – In-Line Pump	D11-13
SLEEVE – Sleeve	D11-13
STGLAS – Sight Glass	D11-13
STRAIN – Strainer	D11-13

STRBLO – Blow Off Strainer.....	D11-13
TDSSC – Double Sweep Tee.....	D11-13
THERM – Thermometer.....	D11-13
TRAPST – Steam Trap	D11-13
TSODSC – Tee, Side Outlet, Outlet Down	D11-14
TSOUSC – Tee, Side Outlet, Outlet Up	D11-14
TSSSC – Straight Size Tee	D11-14
TSSWSC – Single Sweep Tee	D11-14
UNIOSC – Union.....	D11-14
VA3WAM – 3-Way Air Motor Controlled Valve	D11-14
VA3WEM – 3-Way Electric Motor Controlled Valve	D11-14
VA3WM – 3-Way Manual Valve	D11-14
VAAHOS – Angle Hose Valve.....	D11-14
VABALL – Ball Valve	D11-15
VABFLY – Butterfly Valve.....	D11-15
VACWR – Condenser Water Regulating Valve	D11-15
VADISC – Diaphragm Valve	D11-15
VAEMTR – Valve Actuator Electric Motor	D11-15
VAESOL – Valve Actuator Electric Solenoid.....	D11-15
VAGAMC – Air Motor Controlled Gate Valve.....	D11-15
VAGLAM – Air Motor Controlled Globe Valve.....	D11-15
VAGLE – Angle Globe Valve (Elevation)	D11-15
VAGLSE – Globe Valve.....	D11-16
VAGSE – Angle Gate Valve, (Elevation)	D11-16
VAGSP – Angle Gate Valve (Plan)..	D11-16
VAGTSE – Gate Valve.....	D11-16
VAHASC – Hose Angle Valve.....	D11-16
VAHGLS – Hose Globe Valve	D11-16
VAHGSC – Hose Gate Valve	D11-16
VALSSC – Lock Shield Valve	D11-16
VAMAGS – Magnetic Stop Valve....	D11-16
VAMNNS – Valve Actuator Manual Nonrising Stem	D11-17
VAMOGS – Motor Operated Gate Valve	D11-17
VAMOLS – Motor Operated Globe Valve	D11-17
VAMOSY – Valve Actuator Manual	

Outside Stem & Yoke.....	D11-17
VANEED – Needle Valve	D11-17
VAPLUG – Plug Valve.....	D11-17
VAPMTD – Valve Actuator Pneumatic Motor Diaphragm.....	D11-17
VAPRED – Pressure Reducing Valve	D11-17
VAPRRD – Pressure Reducing Valve	D11-17
VAQOSC – Quick Opening Valve ...	D11-18
VARELF – Relief or Safety Valve....	D11-18
VASCE – Angle Globe Valve (Elevation)	D11-18
VASCP – Angle Globe Valve (Plan)	D11-18
VASFSC – Safety Valve	D11-18
VASGCH – Swing Gate Check Valve	D11-18
VASNAP – Snap Action Valve	D11-18
VASOLN – Solenoid Valve.....	D11-18
VASPCH – Spring Check Valve.....	D11-18
VASTSC – Gate Elbow	D11-19
VASWSC – Straight Way Check Valve	D11-19
VATPR – Temperature Pressure Relief Valve.....	D11-19
VLVCHK – Check Valve	D11-19

Mechanical

Lines

ACIDWS – Acid Waste	D12-3
AIRRLF – Atmospheric Vent	D12-3
BOILBD – Boiler Blow Down.....	D12-3
BRINER – Brine Return	D12-3
BRINES – Brine Supply	D12-3
CDRNAF – Condensate Drain.....	D12-3
CMPAIR – Compressed Air	D12-3
CONDPA – Pumped Condensate	D12-3
CONDWR – Condenser Water Return.	D12-3
CONDWS – Condenser Water Supply	D12-4
CWR – Chilled Water Return	D12-4
CWS – Chilled Water Supply	D12-4
DTR – Dual Temperature Return.....	D12-4
DTS – Dual Temperature Supply.....	D12-4
FILL – Fill Line	D12-4
GHR – Glycol Heating Return	D12-4
GHS – Glycol Heating Supply	D12-4
HPCNDR – High Pressure Condensate	D12-4
HTHWR – High Temperature Hot Water Return	D12-5

HTHWS – High Temperature Hot	
Water Supply	D12-5
HUMID – Humidification Line.....	D12-5
HWR – Low Temperature Hot	
Water Return	D12-5
HWS – Low Temperature Hot	
Water Supply.....	D12-5
ICWTR – Industrial Cold Water	D12-5
IHWTRR – Indust. Hot Water Return	D12-5
IHWTRS – Indust. Hot Water Supply.	D12-5
IWASTE – Industrial Waste	D12-5
LPCNDR – Low Pressure Condensate	D12-6
MAKEUP – Make Up Water	D12-6
MPCNDR – Medium Pressure	
Condensate	D12-6
MTHWR – Medium Temperature	
Hot Water Return	D12-6
MTHWS – Medium Temperature	
Hot Water Supply	D12-6
NONPOT – Nonpotable Water	D12-6
PNTUBE – Pneumatic Tube Runs.....	D12-6
REFRL – Refrigerant Liquid	D12-6
REFRS – Refrigerant Suction	D12-6
STEAMH – High Pressure Steam.....	D12-7
STEAML – Low Pressure Steam	D12-7
STEAMM – Medium Pressure Steam.	D12-7
TUVANE – Turning Vanes	D12-7
VACAIR – Vacuum Air	D12-7
VACPD – Vacuum Pump Discharge ..	D12-7

Symbols

ACCDOR – Duct Access Door.....	D12-11
AGUIDE – Alignment Guide.....	D12-11
AIRELM – Air Eliminator	D12-11
AIRIN – Air In.....	D12-11
AIRSEP – Air Separator	D12-11
ANCHRI – Anchor	D12-11
AVENTA – Automatic Air Vent	D12-11
AVENTM – Manual Air Vent	D12-11
BALLJT – Ball Joint.....	D12-11
BUSHSC – Bushing.....	D12-12
CAPSC – Cap	D12-12
CAPTUB – Capillary Tube.....	D12-12
CDRND – Round Ceiling Diffuser ...	D12-12
CDSQR – Square Ceiling Diffuser ...	D12-12
CFM2X3 – Airflow CFM	D12-12
CFM2X4 – Airflow CFM	D12-12

CFM3X4 – Airflow CFM	D12-12
COCKSC – Cock	D12-12
CREDSC – Concentric Reducer	D12-13
CRSRSC – Cross	D12-13
CUPJNT – Coupling Joint	D12-13
DCTHTR – Electric Duct Heater.....	D12-13
DMPEOC – Electric Operated	
Damper Control.....	D12-13
DMPFIR – Fire Damper	D12-13
DMPFS – Fire Smoke Damper	D12-13
DMPPOD – Pneumatic Damper	D12-13
DMPSMK – Smoke Damper	D12-13
DPRSD – Duct Pressure Class Down	D12-14
DPRSH – Duct Pressure Class Horiz	D12-14
DPRSL – Duct Pressure Class Left...	D12-14
DPRSR – Duct Pressure Class Right	D12-14
DPRSU – Duct Pressure Class Up....	D12-14
DPRSV – Duct Pressure Class Vert..	D12-14
DRIER – Drier	D12-14
EEQ2X2 – Electrical Equipment	
2X2 Mark	D12-14
EEQ2X3 – Electrical Equipment	
2X3 Mark	D12-14
EEQ2X4 – Electrical Equipment	
2X4 Mark	D12-15
EEQ3X2 – Electrical Equipment	
3X2 Mark	D12-15
EEQ3X3 – Electrical Equipment	
3X3 Mark	D12-15
EEQ3X4 – Electrical Equipment	
3X4 Mark	D12-15
EL45SC – 45 Degree Elbow.....	D12-15
EL90SC – 90 Degree Elbow	D12-15
ELBSC – Base Elbow	D12-15
ELDBSC – Double Branch Elbow....	D12-15
ELLRSC – Long Radius Elbow	D12-15
ELODSC – Side Outlet Elbow,	
Outlet Down	D12-16
ELOUSC – Side Outlet Elbow,	
Outlet Up	D12-16
ELSTRT – Street Elbow	D12-16
ELTDSC – Turned Down Elbow.....	D12-16
ELTUSC – Turned Up Elbow.....	D12-16
EREDSC – Eccentric Reducer.....	D12-16
EXPJNT – Expansion Joint	D12-16
FANERV – Exhaust Roof Vent Fan .	D12-16
FANLRV – Louvered Roof	
Vent Fan	D12-16

FANSRV – Intake Roof Vent Fan	D12-17
FLBLND – Blind Flange	D12-17
FLOW1 – Air Flow Direction Arrow	D12-17
FLRPEN – Iso. Floor Penetration	D12-17
FLXCON – Flexible Connector.....	D12-17
GAUGE – Gauge	D12-17
GRILEX – Exhaust Grille.....	D12-17
GRILSU – Supply Grille.....	D12-17
HANGRD – Hanger Rod	D12-17
HANGSP – Hanger Spring	D12-18
HSENS – Humidity Sensor	D12-18
HSTAT – Humidistat.....	D12-18
LNDIFF – Linear Diffuser	D12-18
LOOPL – Left Dimension Loop	D12-18
LOOPR – Right Dimension Loop	D12-18
LOUOPN – Door or Wall Louver Opening	D12-18
PIDROP – Pitch or Pipe Drop.....	D12-18
PIRISE – Pitch or Pipe Rise.....	D12-18
PLGBFL – Bull Plug, Flanged.....	D12-19
PLGPSC – Pipe Plug	D12-19
PRGGCO – Pressure Gage and Cock.....	D12-19
PSDIFF – Pump Suction Diffuser....	D12-19
PUMP – Pump	D12-19
PUMPP – Pump (Schematic)	D12-19
PUMPS – In-Line Pump	D12-19
SCALET – Scale Trap	D12-19
SLEEVE – Sleeve	D12-19
STGLAS – Sight Glass	D12-20
STRAIN – Strainer	D12-20
STRBLO – Blow Off Strainer.....	D12-20
SUPOUT – Supply Outlet (Wall Supply)	D12-20
TDSSC – Double Sweep Tee.....	D12-20
THERM – Thermometer.....	D12-20
THERMW – Thermometer Well.....	D12-20
THHRB – Thermostat, Remote Bulb	D12-20
THHSC – Thermostat, Self Contained (HVAC).....	D12-20
THLPRS – Thermostat, Low Pressure	D12-21
THMCP – Thermostat, Microprocessor	D12-21
THPELE – Thermostat, Electric	D12-21
THPPNE – Thermostat, Pneumatic...	D12-21
TMPSEN – Temperature Sensor.....	D12-21
TODSC – Tee, Outlet Down.....	D12-21
TOUSC – Tee, Outlet Up.....	D12-21
TRAPFL – Float Trap	D12-21
TRAPFT – Float and Thermostatic Trap	D12-21
TRAPST – Steam Trap	D12-22
TRAPTB – Thermostatic Blast Trap	D12-22
TSODSC – Tee, Side Outlet, Outlet Down	D12-22
TSOUSC – Tee, Side Outlet, Outlet Up	D12-22
TSSSC – Straight Size Tee	D12-22
TSSWSC – Single Sweep Tee	D12-22
UNIOSC – Union.....	D12-22
VA3WAM – 3-Way Air Motor Controlled Valve	D12-22
VA3WEM – 3-Way Electric Motor Controlled Valve	D12-22
VA3WM – 3-Way Manual Valve	D12-23
VAAHOS – Angle Hose Valve.....	D12-23
VABALL – Ball Valve	D12-23
VABFLY – Butterfly Valve.....	D12-23
VACWR – Condenser Water Regulating Valve	D12-23
VADISC – Diaphragm Valve	D12-23
VAEMTR – Valve Actuator Electric Motor	D12-23
VAESOL – Valve Actuator Electric Solenoid	D12-23
VAFLSC – Float Valve.....	D12-23
VAGAMC – Air Motor Controlled Gate Valve	D12-24
VAGLAM – Air Motor Controlled Globe Valve.....	D12-24
VAGLSE – Globe Valve.....	D12-24
VAGSE – Angle Gate Valve.....	D12-24
VAGSP – Angle Gate Valve.....	D12-24
VAGTSE – Gate Valve.....	D12-24
VAHASC – Hose Angle Valve.....	D12-24
VAHGLS – Hose Globe Valve	D12-24
VAHGSC – Hose Gate Valve	D12-25
VALSSC – Lock Shield Valve	D12-25
VAMAGS – Magnetic Stop Valve....	D12-25
VAMNNS – Valve Actuator Manual Nonrising Stem	D12-25
VAMOGS – Motor Operated Gate Valve	D12-25
VAMOLS – Motor Operated Globe Valve	D12-25

VAMOSY – Valve Actuator Manual	
Outside Stem & Yoke.....	D12-25
VANEEED – Needle Valve	D12-25
VAPLUG – Plug Valve.....	D12-25
VAPMTD – Valve Actuator	
Pneumatic Motor Diaphragm.....	D12-26
VAPRED – Pressure Reducing Valve	D12-26
VAPRRD – Pressure Reducing	
Valve	D12-26
VAQOSC – Quick Opening Valve ...	D12-26
VARELF – Relief or Safety Valve....	D12-26
VASCE – Angle Globe Valve.....	D12-26
VASCP – Angle Globe Valve.....	D12-26
VASFSC – Safety Valve.....	D12-26
VASGCH – Swing Gate Check Valve	D12-26
VASNAP – Snap Action Valve	D12-27
VASOLN – Solenoid Valve.....	D12-27
VASPCH – Spring Check Valve.....	D12-27
VASTSC – Gate Valve	D12-27
VASWSC – Straight Way Check	
Valve	D12-27
VATPR – Temperature Pressure	
Relief Valve.....	D12-27

Electrical

Lines

BUSWAY – Busway	D13-3
CABLTV – Cable TV	D13-3
COMARN – New Communication,	
Aerial.....	D13-3
COMARX – Existing Communication,	
Aerial.....	D13-3
COMUGN – New Communication,	
Underground.....	D13-3
COMUGX – Existing Communication,	
Underground.....	D13-3
CONDFL – Flexible Conduit.....	D13-3
DUCTTR – Trolley Duct	D13-3
EPARN – New Electrical Primary,	
Aerial.....	D13-3
EPARX – Existing Electrical Primary,	
Aerial.....	D13-4
EPUGN – New Electrical Primary,	
Underground.....	D13-4
EPUGX – Existing Electrical Primary,	

Underground.....	D13-4
ESARN – New Electrical Secondary,	
Aerial.....	D13-4
ESARX – Existing Electrical Secondary,	
Aerial.....	D13-4
ESUGN – New Electrical Secondary,	
Underground.....	D13-4
ESUGX – Existing Electrical Secondary,	
Underground.....	D13-4
EUDUCN – New Duct Bank,	
Underground.....	D13-4
EUDUCX – Existing Duct Bank,	
Underground.....	D13-4
FIBOPT – Fiber Optics Line.....	D13-5
LADDER – Cable Ladder.....	D13-5
WIREWY – Wireway	D13-5

Symbols

1DIR – Direction Arrow	D13-9
2DIR – Double Direction Arrow.....	D13-9
ACCBIO – Biometric Access Control	D13-9
ACLLEL – Elevated Approach	
Lightbar	D13-9
ACLLSF – Semiflush Approach	
Lightbar	D13-9
AERROD – Aerial Rod	D13-9
AFBCN – Airfield Beacon.....	D13-9
ANNUN – Annunciator	D13-9
ANNUNT – Local Control	
Annunciation Unit	D13-9
ARREST – Lightning Arrestor	D13-10
BARMKR – Barrier Marker	D13-10
BATTRY – Battery	D13-10
BELL – Bell	D13-10
BUZZER – Buzzer	D13-10
CAPCTR – Capacitor	D13-10
CARDRD – Card Reader.....	D13-10
CBDOUT – Drawout Circuit Breaker	D13-10
CBMCAS – Molded Case Circuit	
Breaker	D13-10
CHIME – Chime	D13-11
CKTID – Circuit ID Symbol	D13-11
CLOCKW – Clock Outlet,	
Wall Mounted.....	D13-11
CMHNL – New Communication	
Manhole.....	D13-11

CMHLX – Existing Communication	
Manhole	D13-11
CMPANL – Communication Panel...	D13-11
CPLTM – Circuit Line Terminator ...	D13-11
CPREC2 – Cathodic Protection	
Rectifier	D13-11
CPSAN – Cathodic Protection	
Sacrificial Anode	D13-11
CPTEST – Cathodic Protection	
Test Station.....	D13-12
DBID – Ductbank ID Symbol	D13-12
DGUYN – New Downguy.....	D13-12
DGUZR – To Be Removed	
Downguy	D13-12
DOROPN – Electric Door Opener....	D13-12
DSTMKR – Runway Distance	
Marker	D13-12
DTHL – Displaced Threshold Light .	D13-12
DXFMR – Dry Type Transformer	D13-12
EHHLN – New Electrical Handhole.	D13-12
EHHLX – Exist. Electrical Handhole	D13-13
ELBP1L – 1 Lamp Emergency Light	D13-13
ELBP2L – 2 Lamp Emergency Light	D13-13
ELBP3L – 3 Lamp Emergency Light	D13-13
EMHLN – New Electrical Manhole..	D13-13
EMHLX – Exist. Electrical Mahole..	D13-13
EPBXN – New Electrical Pullbox	D13-13
EPBXX – Exist. Electrical Pullbox...	D13-13
ERECPT – Emergency Receptacle ...	D13-13
EXITCM – Ceiling Mtd. Exit Light..	D13-14
EXITLF – Exit Sign Lighted Face	D13-14
EXITWM – Wall Mounted Exit	
Sign Light.....	D13-14
FAN – Ceiling Fan.....	D13-14
FIXSPB – Surface Pendant Battery	
Fixture	D13-14
FIXSPQ – Surface Pendant Battery	
Quartz Restrike	D13-14
FIXSPR – Surface Pendant Battery	
Receptacle	D13-14
FIXWWM – Wall Mounted Fixture	D13-14
FIXWMB – Wall Mounted Battery	
Fixture	D13-14
FL14WB – 1 X 4 Wall Mounted Fixture	
w/Battery	D13-15
FL14WM – 1 X 4 Wall Mounted	
Fixture	D13-15
FL1X4 – 1 X 4 Light Fixture	D13-15
FL1X4B – 1 X 4 Light Fixture	
w/Battery	D13-15
FL1X4C – 1 X 4 Light Fixture,	
Continuous	D13-15
FL2X2 – 2 X 2 Light Fixture	D13-15
FL2X2B – 2 X 2 Light Fixture	
w/Battery	D13-15
FL2X2C – 2 X 2 Light Fixture,	
Continuous	D13-15
FL2X4 – 2 X 4 Light Fixture	D13-15
FL2X4B – 2 X 4 Light Fixture	
w/Battery	D13-16
FL2X4C – 2 X 4 Light Fixture,	
Continuous	D13-16
FLTN – New Floodlight	D13-16
FLTR – To Be Removed Floodlight .	D13-16
FLTX – Existing Floodlight.....	D13-16
FUSRAT – Fuse with Rating	D13-16
GENRTR – Generator.....	D13-16
GRDROD – Grounding Rod.....	D13-16
GROUND – Earth Ground.....	D13-16
HAS1H – 1 Hot Leg	D13-17
HAS1N – 1 Neutral Leg.....	D13-17
HAS1S – 1 Switch Leg	D13-17
HAS2H – 2 Hot Legs.....	D13-17
HAS2S – 2 Switch Legs.....	D13-17
HAS3HN – 3 Hot, 1 Neutral Leg.....	D13-17
HAS3MK – Hot/Neutral/Ground.....	D13-17
HAS3S – 3 Switch Legs.....	D13-17
HAS4MK – 2 Hot/Neutral/Ground...	D13-17
HAS5MK – 3 Hot/Neutral/Ground...	D13-18
HASGND – 1 Ground Leg	D13-18
HEDASW – Aerial Service Weather	
Head	D13-18
HLL – Hoverlane	D13-18
HLLL – Hoverlane Limit Light.....	D13-18
HPIL – Helipad Inset Light.....	D13-18
HPPLEL – Elevated Helipad	
Perimeter Light.....	D13-18
HPPLSF – Semiflush Helipad	
Perimeter Light.....	D13-18
HRUN1 – Home Run.....	D13-18
HRUN2 – Home Run.....	D13-19
HRUN3 – Home Run.....	D13-19
JNBX – Junction Box	D13-19
JNBXWM – Wall Mtd. Junction Box	D13-19
KNR – Keyed Note Reference	D13-19
KNRM – Keyed Note Reference.....	D13-19
LEADER – Leader Line	D13-19

LITEBR – Emergency Battery Power	
Light Remote	D13-19
LTPLN – New Light Pole	D13-19
LTPLR – To Be Removed Light Pole	D13-20
LTPLX – Existing Light Pole	D13-20
LTSTRN – New Street Light Bracket	D13-20
LTSTRR – To Be Removed Street	
Light Bracket	D13-20
LTSTRX – Existing Street Light	
Bracket.....	D13-20
METREL – Electrical Meter	D13-20
MICROW – Outdoor Microwave	
Transmit Unit	D13-20
MOTRHP – Motor.....	D13-20
OBSTRL – Obstruction Light	D13-20
PAPI – PAPI Light Unit.....	D13-21
PBFMC – Flush Mounted	
Panelboard Cabinet.....	D13-21
PBSMC – Surface Mounted	
Panelboard/Cabinet.....	D13-21
PHOTO – Photoelectric Relay	D13-21
POLEAR – Aerial Pole w/Guying	D13-21
POLEID – Pole Identification Symbol	D13-21
PSHST1 – One Pushbutton Station...	D13-21
PSHST2 – Two Pushbutton Station ..	D13-21
PSHST3 – Three Pushbutton Station	D13-21
PWRDVC – Power System Device...	D13-22
RCNC – Normally Closed Relay	
Contact	D13-22
RCNO – Normally Open Relay	
Contact	D13-22
RECDFM – Floor Outlet, Double	
Flush Mounted.....	D13-22
RECDSM – Double Surf Mount	
Floor Outlet	D13-22
RECDUP – Duplex Receptacle.....	D13-22
RECLOS – Recloser Aerial	
Automatic	D13-22
RECPT2 – Special Receptacle	D13-22
RECQUA – Quadruplex Receptacle .	D13-22
RECRAN – Receptacle Range	D13-23
RECSDP – Switched Duplex	
Receptacle	D13-23
RECSFM – Floor Outlet, Single	
Flush Mounted.....	D13-23
RECSIN – Single Receptacle.....	D13-23
RECSNS – Single Receptacle	
with Switch.....	D13-23
RECSPR – Special Purpose	
Receptacle	D13-23
RECSSM – Single Surf Mount	
Floor Outlet	D13-23
REIL – Reil Light Unit.	D13-23
RELYOP – Relay OP Coil.....	D13-23
RESHTR – Elec. Resistance Heater..	D13-24
RWCLL – Runway Center Light	D13-24
RWEL – Runway End Light.....	D13-24
RWLEL – Elevated Runway Edge	
Light	D13-24
RWLSF – Semiflush Runway Edge	
Light	D13-24
S3ABC – 3 Three Way Switches.	D13-24
SABC – 3 Single Switches.....	D13-24
SECTAA – Sectionalizer Aerial	
Auto	D13-24
SENGV – Generic Volumetric	
Sensor	D13-24
SENULS – Ultrasonic Sensor.	D13-25
SFL – Sequenced Flasher Light	D13-25
SLLN – New Streetlight.....	D13-25
SLLR – To Be Removed Streetlight.	D13-25
SLLX – Existing Streetlight.....	D13-25
SLREG – Constant Current	
Transformer.	D13-25
SM – Motor Switch.....	D13-25
SOUNDS – Sound System.....	D13-25
STP14 – 1 X 4 Strip, Surface Pendant	
Recessed.	D13-25
STP14B – 1 X 4 Strip, Surface Pendant	
Recessed w/Battery.....	D13-26
STP18 – 1 X 8 Strip, Surface Pendant	
Recessed.	D13-26
STP18B – 1 X 8 Strip, Surface Pendant	
Recessed w/Battery.....	D13-26
SUBSTA – Substation.	D13-26
SWFLNC – Normally Closed	
Float Switch.....	D13-26
SWFLNO – Normally Open	
Float Switch.....	D13-26
SWFNC – Normally Closed	
Flow Switch.....	D13-26
SWFNO – Normally Open Flow	
Switch.....	D13-26
SWFONC – Normally Closed	
Foot-Operated Switch.....	D13-26
SWI2WY – Double Pole Switch.....	D13-27

SWI3WY – Three Way Switch	D13-27
SWI4WY – Four Way Switch.....	D13-27
SWICB – Circuit Breaker	D13-27
SWIDIS – Disconnect Switch	D13-27
SWIDM1 – Dimmer.....	D13-27
SWIDM2 – Dimmer Switch.....	D13-27
SWIDUR – Duress Switch.....	D13-27
SWIFUS – Fused Switch	D13-27
SWIKEY – Key-Operated Switch....	D13-28
SWILVM – Low Voltage Master Switch.....	D13-28
SWITCH – Single Pole Switch	D13-28
SWITIM – Timer Operated Switch...	D13-28
SWLAMP – Lamp Holder Pole Switch.....	D13-28
SWLNC – Normally Closed Limit Switch.....	D13-28
SWLNO – Normally Open Limit Switch	D13-28
SWMULT – Multiposition Switch...D13-28	
SWPADN – New Switchpad.	D13-28
SWPADX – Existing Switchpad.....	D13-29
SWPCM – Ceiling Mounted Pull Switch	D13-29
SWPCOI – Pressure Switch-Close on Increase.....	D13-29
SWPOOI – Pressure Switch-Open on Increase.....	D13-29
SWSBRK – Single Break Switch	D13-29
SWTANC – Normally Closed Temp Activated Switch	D13-29
SWTANO – Normally Open Temp Activated Switch	D13-29
SWTDNC – Normally Closed Time Delay Switch	D13-29
SWTDNO – Normally Open Time Delay Switch	D13-29
TDZL – Touchdown Zone Light.....	D13-30
THL – Threshold Light	D13-30
TOWER – Transmission Tower.....	D13-30
TRFSIG – Traffic Signal Mast Arm..	D13-30
TSCTRL – Traffic Signal Controller	D13-30
TSHEAD – Traffic Signal Head	D13-30
TSPBX – Traffic Signal Pullbox.....	D13-30
TSPHS – Traffic Signal Phase #, Thru	D13-30
TSPHT – Traffic Signal Phase #, Turn	D13-30
TSTAT – Thermostat.....	D13-31

TSVLDT – Traffic Signal Vehicle Loop Detector	D13-31
TVOUT – Television Outlet	D13-31
TWCLL – Taxiway Centerline Light D13-31	
TWELEL – Elevated Taxiway End Light	D13-31
TWELSF – Semiflush Taxiway End Light	D13-31
TWGSGN – Taxiway Guidance SignD13-31	
TWLEL – Elevated Taxiway Edge Light	D13-31
TWLSEF – Semiflush Taxiway Edge Light	D13-31
UTPLN – New Pole	D13-32
UTPLR – To Be Removed Pole.....	D13-32
UTPLX – Existing Pole	D13-32
WINDCN – Windcone.....	D13-32
WYECON – XFMR Wye Connection.....	D13-32
WYEXGC – XFMR Grounded Connection.....	D13-32
XFRPLN – New XFMR Pole	D13-32
XFRPLR – To Be Removed XFMR Pole.....	D13-32
XFRPLX – Existing XFMR Pole.....	D13-32
XFRPMN – New XFMR Pad	D13-33
XFRPMR – To Be Removed XFMR Pad.....	D13-33
XFRPMX – Existing XFMR Pad.....	D13-33

Telecommunications

Lines

FIBOPT – Fiber Optics Line.....	D14-3
WIREWY – Wireway	D14-3

Symbols

GRDROD – Grounding Rod.....	D14-7
RECDC – Data Communication Wall Receptacle	D14-7
RECDCF – Data Communication Floor Receptacle	D14-7
RECTDF – Telephone/Data Floor Receptacle	D14-7
RECTDW – Telephone/Data Wall Receptacle	D14-7

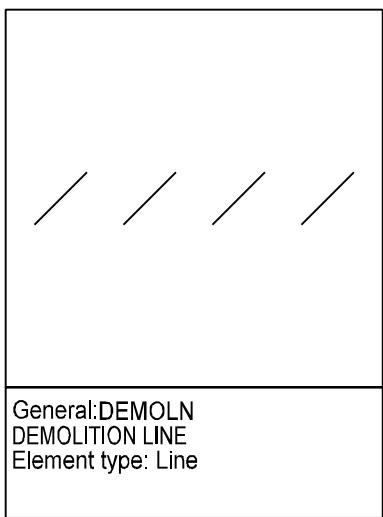
RECTEF – Telephone Floor

ReceptacleD14-7

RECTEL – Telephone Wall ReceptacleD14-7

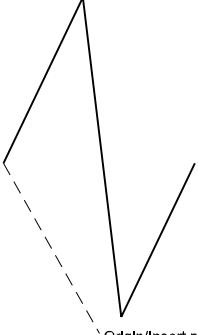
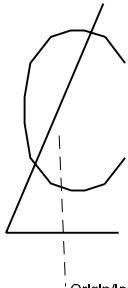
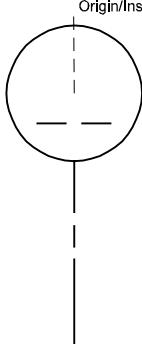
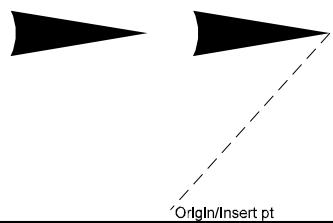
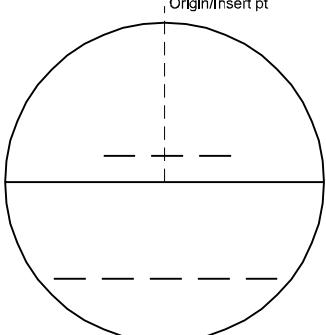
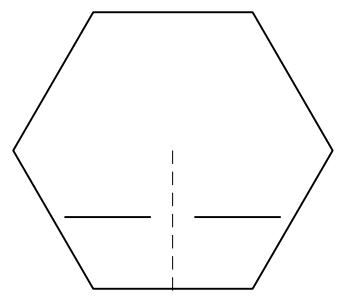
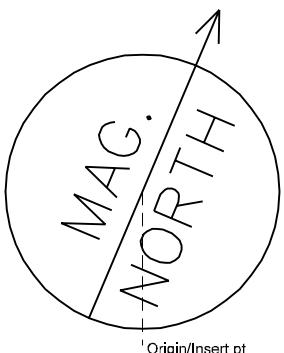
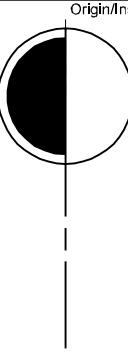
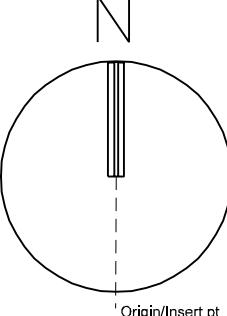
TBOOTH – Telephone Booth.....D14-7

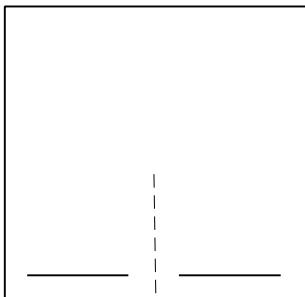
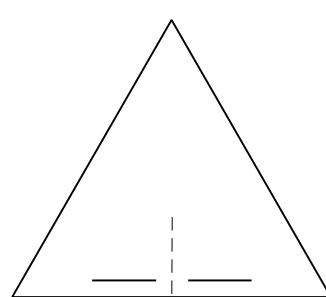
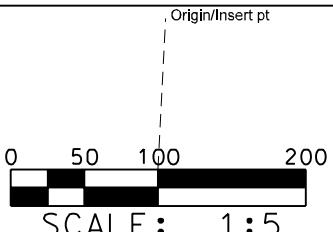
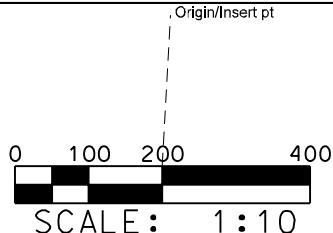
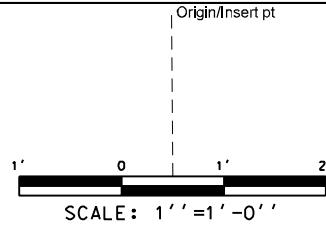
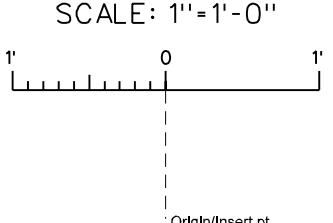
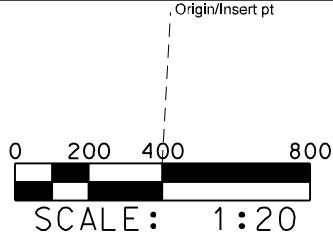
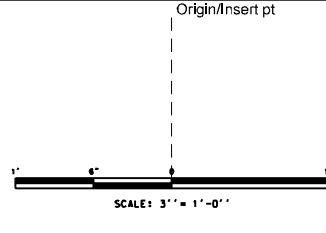
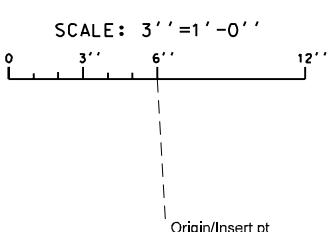
1 General Lines Library

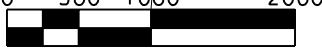
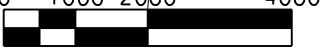
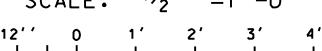
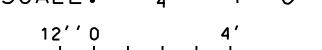
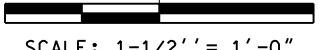
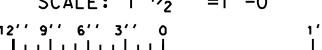


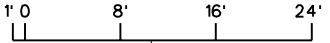
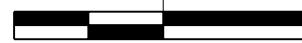
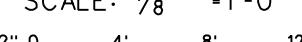
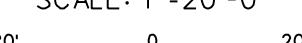
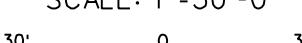
General:DEMOLN
DEMOLITION LINE
Element type: Line

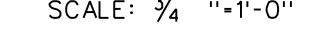
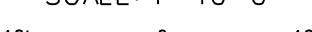
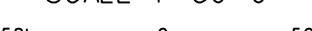
1 General Symbols Library

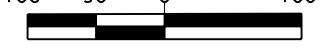
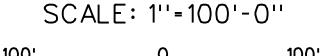
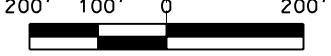
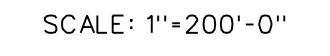
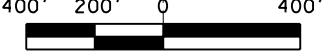
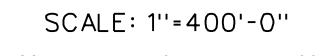
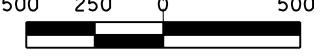
		
General:BREAK BREAK LINE SYMBOL Element type: Symbol	General:CNTLIN CENTERLINE SYMBOL Element type: Symbol	General:COLLIN COLUMN LINE GRID INDICATOR Element type: Symbol
		
General:DBLARR DOUBLE ARROW TERMINATOR Element type: Symbol	General:DTLIND DETAIL INDICATOR Element type: Symbol	General:KEYIND KEYNOTE INDICATOR Element type: Symbol
		
General:MAGNOR MAGNETIC NORTH ARROW Element type: Symbol	General:MATIND MATCH LINE INDICATOR Element type: Symbol	General:NORIND NORTH INDICATOR Element type: Symbol

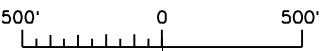
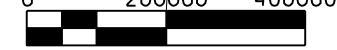
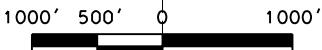
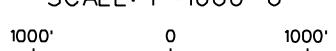
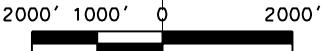
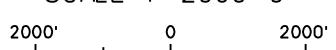
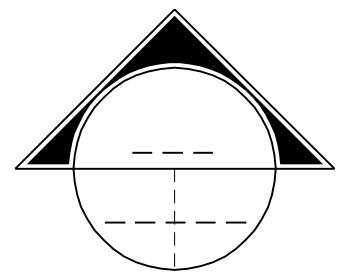
		 SCALE : 1:5
General:NOTIND NOTE INDICATOR Element type: Symbol	General:REVIND REVISION INDICATOR Element type: Symbol	General:S00005 SCALE 1 EQ 5 Element type: Symbol
 SCALE : 1:10	 SCALE : 1''=1'-0'' 1'''=1'-0'''	 SCALE : 1''=1'-0'' 1'''=1'-0'''
General:S00010 SCALE 1 EQ 10 Element type: Symbol	General:S0001B SCALE 1IN EQ 1FT Element type: Symbol	General:S0001G SCALE 1IN EQ 1FT Element type: Symbol
 SCALE : 1:20	 SCALE : 3''=1'-0'' 3'''=1'-0'''	 SCALE : 3''=1'-0'' 3'''=1'-0'''
General:S00020 SCALE 1 EQ 20 Element type: Symbol	General:S0003B SCALE 3IN EQ 1FT Element type: Symbol	General:S0003G SCALE 3IN EQ 1FT Element type: Symbol

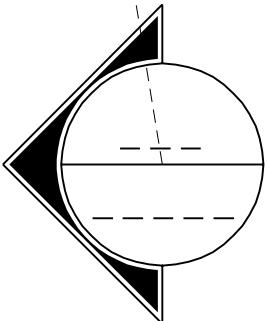
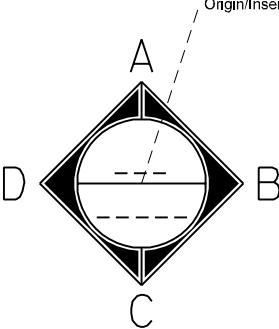
 <p>Origin/Insert pt SCALE : 1:50</p>	 <p>Origin/Insert pt SCALE : 1'' = 1'</p>	 <p>Origin/Insert pt SCALE : 1:100</p>
General:S00050 SCALE 1 EQ 50 Element type: Symbol	General:S000B SCALE FULL Element type: Symbol	General:S00100 SCALE 1 EQ 100 Element type: Symbol
 <p>Origin/Insert pt SCALE : 1/2' = 1'-0"</p>	 <p>Origin/Insert pt SCALE : 1/2' = 1'-0"</p>	 <p>Origin/Insert pt SCALE : 1/4' = 1'-0"</p>
General:S0012B SCALE 0.5IN EQ 1FT Element type: Symbol	General:S0012G SCALE 0.5IN EQ 1FT Element type: Symbol	General:S0014B SCALE 0.25IN EQ 1FT Element type: Symbol
 <p>Origin/Insert pt SCALE : 1/4' = 1'-0"</p>	 <p>Origin/Insert pt SCALE : 1-1/2' = 1'-0"</p>	 <p>Origin/Insert pt SCALE : 1-1/2' = 1'-0"</p>
General:S0014G SCALE 0.25IN EQ 1FT Element type: Symbol	General:S0015B SCALE 1.5IN EQ 1FT Element type: Symbol	General:S0015G SCALE 1.5IN EQ 1FT Element type: Symbol

 <p>SCALE: $\frac{1}{16}$ ''= 1'-0''</p>	<p>SCALE: $\frac{1}{16}$ ''= 1'-0''</p> 	 <p>SCALE: $\frac{1}{8}$ ''= 1'-0''</p>
<p>General:S0016B SCALE ONE 16TH IN EQ 1FT Element type: Symbol</p>	<p>General:S0016G SCALE ONE 16TH IN EQ 1FT Element type: Symbol</p>	<p>General:S0018B SCALE ONE 8TH IN EQ 1FT Element type: Symbol</p>
 <p>SCALE: $\frac{1}{8}$ ''= 1'-0''</p>  <p>SCALE: 1:200</p>	 <p>SCALE: 1:200</p>	 <p>SCALE: 1''= 20'-0''</p>
<p>General:S0018G SCALE ONE 8TH IN EQ 1FT Element type: Symbol</p>	<p>General:S00200 SCALE 1 EQ 200 Element type: Symbol</p>	<p>General:S0020B SCALE 1IN EQ 20FT Element type: Symbol</p>
 <p>SCALE: 1''= 20'-0''</p>  <p>SCALE: 1''= 30'-0''</p>	 <p>SCALE: 1''= 30'-0''</p>	 <p>SCALE: 1''= 30'-0''</p>
<p>General:S0020G SCALE 1IN EQ 20FT Element type: Symbol</p>	<p>General:S0030B SCALE 1IN EQ 30FT Element type: Symbol</p>	<p>General:S0030G SCALE 1IN EQ 30FT Element type: Symbol</p>

 <p>Origin/Insert pt 1' 6" 0 1' SCALE: $\frac{3}{4}$' = 1'-0"</p>	 <p>SCALE: $\frac{3}{4}$" = 1'-0" 12" 6" 0 1' 2' Origin/Insert pt</p>	 <p>40' 20' 0 40' SCALE: 1' = 40'-0"</p>
<p>General:S0034B SCALE 0.75IN EQ 1FT Element type: Symbol</p>	<p>General:S0034G SCALE 0.75IN EQ 1FT Element type: Symbol</p>	<p>General:S0040B SCALE 1IN EQ 40FT Element type: Symbol</p>
 <p>SCALE: 1' = 40'-0" 40' 0 40' Origin/Insert pt</p>	 <p>0 5000 10000 20000 SCALE: 1:500 Origin/Insert pt</p>	 <p>50' 25' 0 50' SCALE: 1' = 50'-0" Origin/Insert pt</p>
<p>General:S0040G SCALE 1IN EQ 40FT Element type: Symbol</p>	<p>General:S00500 SCALE 1 EQ 500 Element type: Symbol</p>	<p>General:S0050B SCALE 1IN EQ 50FT Element type: Symbol</p>
 <p>SCALE: 1' = 50'-0" 50' 0 50' Origin/Insert pt</p>	 <p>60' 30' 0 60' SCALE: 1' = 60'-0" Origin/Insert pt</p>	 <p>SCALE: 1' = 60'-0" 60' 0 60' Origin/Insert pt</p>
<p>General:S0050G SCALE 1IN EQ 50FT Element type: Symbol</p>	<p>General:S0060B SCALE 1IN EQ 60FT Element type: Symbol</p>	<p>General:S0060G SCALE 1IN EQ 60FT Element type: Symbol</p>

 <p>SCALE : 1:1000</p>	 <p>SCALE : 1' = 100'-0"</p>	 <p>SCALE : 1'' = 100'-0"</p>
General:S01000 SCALE 1 EQ 1000 Element type: Symbol	General:S0100B SCALE 1IN EQ 100FT Element type: Symbol	General:S0100G SCALE 1IN EQ 100FT Element type: Symbol
 <p>SCALE : 1' = 200'-0"</p>	 <p>SCALE : 1'' = 200'-0"</p>	 <p>SCALE : 1'' = 400'-0"</p>
General:S0200B SCALE 1IN EQ 200FT Element type: Symbol	General:S0200G SCALE 1IN EQ 200FT Element type: Symbol	General:S0400B SCALE 1IN EQ 400FT Element type: Symbol
 <p>SCALE : 1'' = 400'-0"</p>	 <p>SCALE : 1:5000</p>	 <p>SCALE : 1'' = 500'-0"</p>
General:S0400G SCALE 1IN EQ 400FT Element type: Symbol	General:S05000 SCALE 1 EQ 5000 Element type: Symbol	General:S0500B SCALE 1IN EQ 500FT Element type: Symbol

<p>SCALE: 1''=500'-0"</p>  <p>500' 0 500'</p> <p>Origin/Insert pt</p>	<p>,Origin/Insert pt</p>  <p>0 120000 240000</p> <p>SCALE : 1:6000</p>	<p>,Origin/Insert pt</p>  <p>0 200000 400000</p> <p>SCALE : 1:10000</p>
<p>General:S0500G SCALE 1IN EQ 500FT Element type: Symbol</p>	<p>General:S06000 SCALE 1 EQ 6000 Element type: Symbol</p>	<p>General:S10000 SCALE 1 EQ 10000 Element type: Symbol</p>
<p>,Origin/Insert pt</p>  <p>1000' 500' 0 1000'</p> <p>SCALE : 1 '' = 1000' -0 "</p> <p>Origin/Insert pt</p>	<p>,Origin/Insert pt</p>  <p>1000' 0 1000'</p> <p>SCALE: 1''=1000'-0"</p> <p>Origin/Insert pt</p>	<p>,Origin/Insert pt</p>  <p>0 400000 800000</p> <p>SCALE : 1:20000</p>
<p>General:S1000B SCALE 1IN EQ 1000FT Element type: Symbol</p>	<p>General:S1000G SCALE 1IN EQ 1000FT Element type: Symbol</p>	<p>General:S20000 SCALE 1 EQ 20000 Element type: Symbol</p>
<p>,Origin/Insert pt</p>  <p>2000' 1000' 0 2000'</p> <p>SCALE : 1 '' = 2000' -0 "</p> <p>Origin/Insert pt</p>	<p>,Origin/Insert pt</p>  <p>2000' 0 2000'</p> <p>SCALE: 1''=2000'-0"</p> <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>General:S2000B SCALE 1IN EQ 2000FT Element type: Symbol</p>	<p>General:S2000G SCALE 1IN EQ 2000FT Element type: Symbol</p>	<p>General:SECIN1 SECTION ELEVATION INDICATOR Element type: Symbol</p>

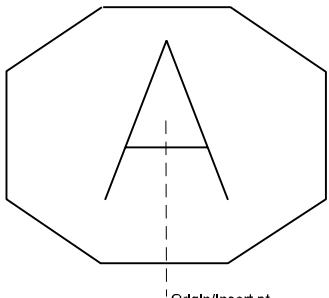
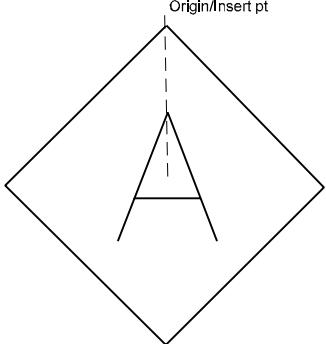
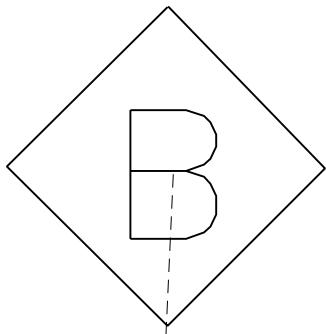
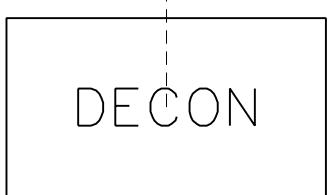
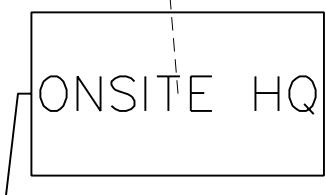
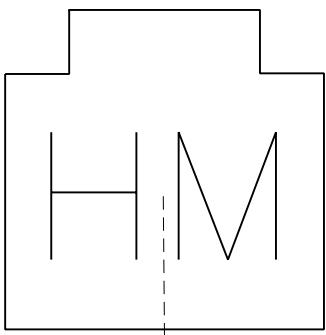
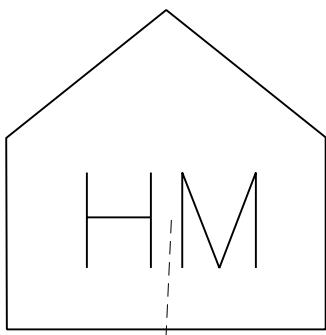
 <p>,Origin/Insert pt</p>	 <p>,Origin/Insert pt</p>
<p>General:SECIN2 SECTION ELEVATION INDICATOR Element type: Symbol</p>	<p>General:SECIN3 SECTION ELEVATION INDICATOR Element type: Symbol</p>

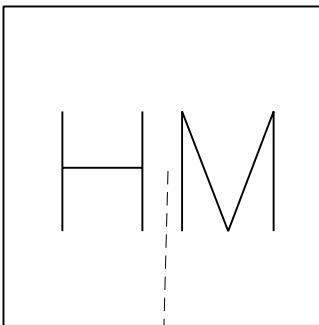
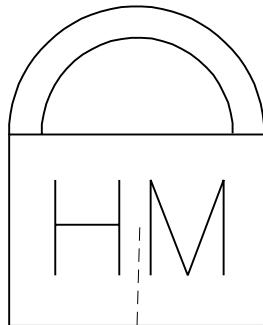
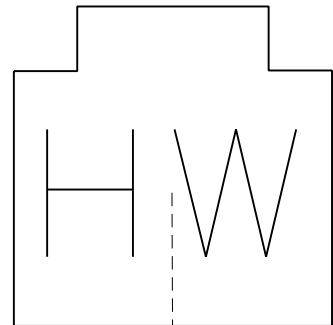
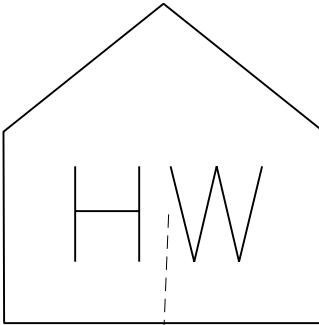
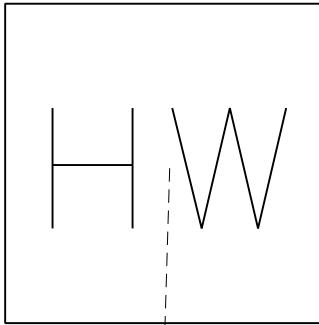
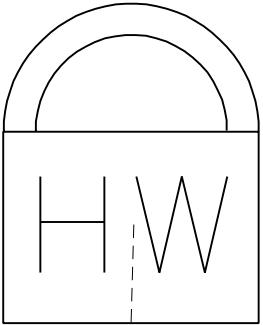
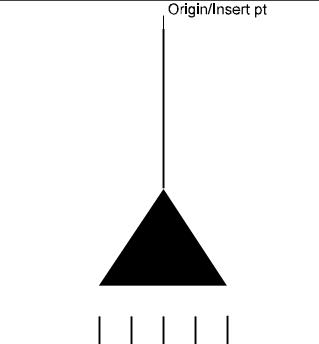
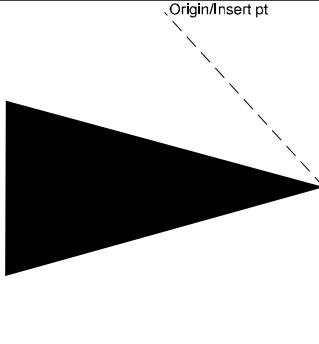
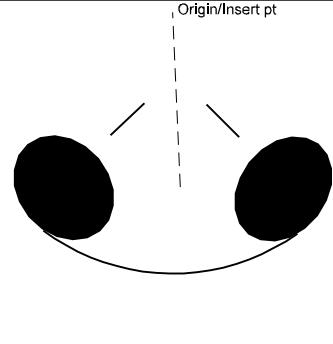
2 Hazardous Materials Lines Library

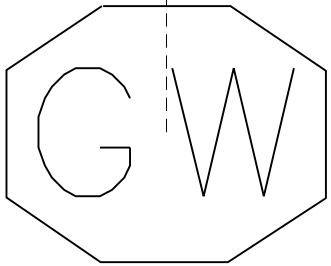
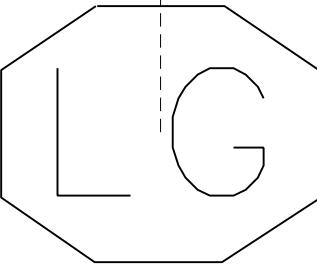
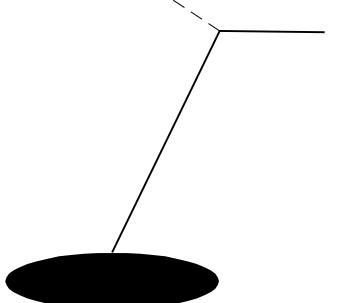
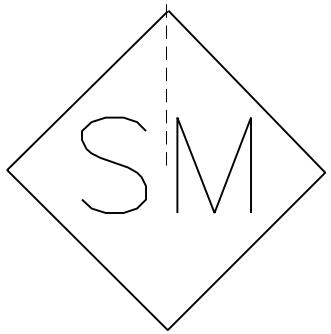
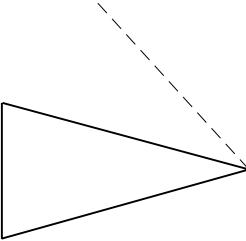
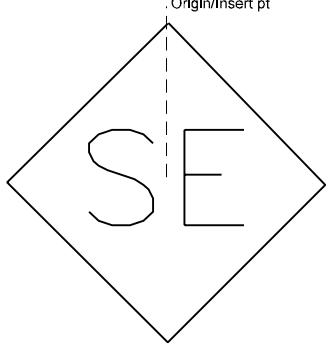
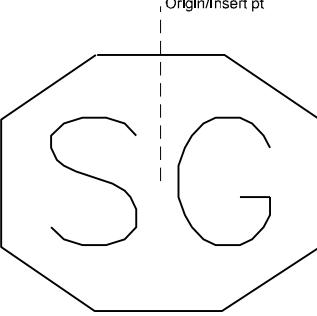
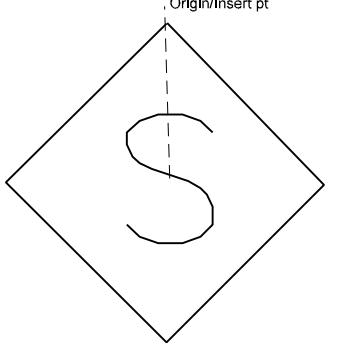
_____ H A Z _____

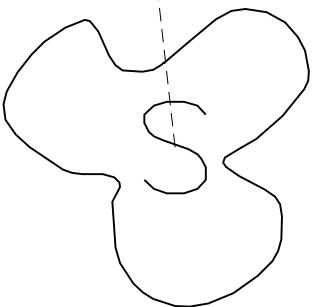
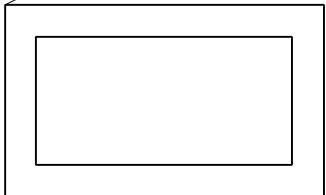
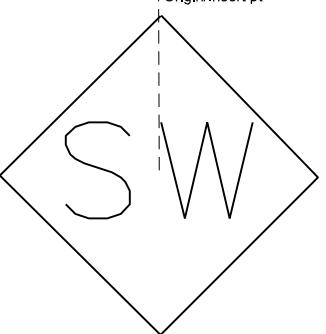
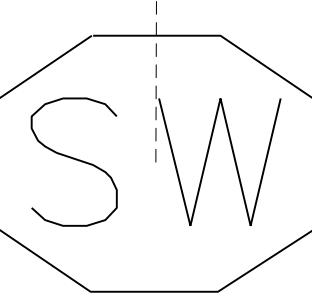
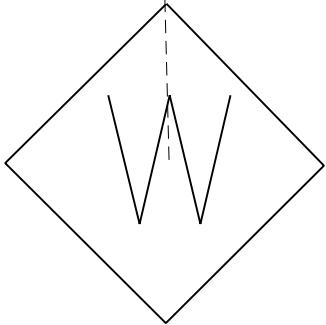
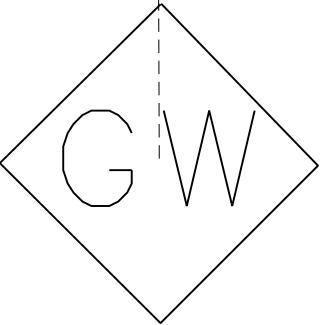
Hazardous Materials:HAZMAT
HAZARDOUS MATERIAL TRAN
Element type: Line

2 Hazardous Materials Symbols Library

		
Hazardous Materials: AIRQST AIR QUALITY MON STA Element type: Symbol	Hazardous Materials: AIRSMP AIR SAMPLE LOCATION Element type: Symbol	Hazardous Materials: BIOSMP BIOLOGICAL SAMPLE LOC Element type: Symbol
		
Hazardous Materials: EGDECN EQUIPMENT DECON Element type: Symbol	Hazardous Materials: EGONST ONSITE COMMAND POST Element type: Symbol	Hazardous Materials: EGSITE SITE INFORMATION CENTER Element type: Symbol
		
Hazardous Materials: EGWASH WASHDOWN WATER TANK Element type: Symbol	Hazardous Materials: EZMSA HAZMAT STOR LOCATION Element type: Symbol	Hazardous Materials: EHZMSB HAZMAT STOR BLDG Element type: Symbol

		
Hazardous Materials: EHZMSR HAZMAT STORAGE ROOM Element type: Symbol	Hazardous Materials: EZHMSV HAZMAT STOR VAULT Element type: Symbol	Hazardous Materials: EHZWAS HAZWASTE STOR LOC Element type: Symbol
		
Hazardous Materials: EHZWAS HAZWASTE STOR BLDG Element type: Symbol	Hazardous Materials: EHZWAS HAZWASTE STOR ROOM Element type: Symbol	Hazardous Materials: EZHWSV HAZWASTE STOR VAULT Element type: Symbol
		
Hazardous Materials: EMGSHW EMERGENCY SHOWER Element type: Symbol	Hazardous Materials: EPOLLS POLLUTION SOURCE SITE Element type: Symbol	Hazardous Materials: EYEWAS EMERGENCY EYEWASH Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Hazardous Materials: GWTQST GRDWTR QUALITY MON STATION Element type: Symbol	Hazardous Materials: LANGAS LANDFILL GAS MON PROBE Element type: Symbol	Hazardous Materials: MAGLOC MAGNETOMETER DET LOC Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Hazardous Materials: MATSMP SOLID MAT SAMPLE LOC Element type: Symbol	Hazardous Materials: PRLLOC POTENTIAL RELEASE LOC Element type: Symbol	Hazardous Materials: RESTR RESTRICTED ACCESS Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Hazardous Materials: SEDSMP SEDIMENT SAMPLE LOC Element type: Symbol	Hazardous Materials: SOLGAS SOIL GAS MONIT PROBE Element type: Symbol	Hazardous Materials: SOLSMP SOIL SAMPLE LOCATION Element type: Symbol

		
Hazardous Materials:SPLRES SPILL RESPONSE Element type: Symbol	Hazardous Materials:SPLTNK SPILL CONTAINMENT TANK Element type: Symbol	Hazardous Materials:SURSMP SURFACE WTR SAMPLE LOC Element type: Symbol
		
Hazardous Materials:SWTQST SURF WTR QUAL MON STATION Element type: Symbol	Hazardous Materials:WASSMP WASTE SAMPLE LOCATION Element type: Symbol	Hazardous Materials:WATSMP GROUNDWATER SAMPLE LOC Element type: Symbol

3 Survey/Mapping Lines Library

Survey/Mapping: 16THLN SIXTEENTH LINE Element type: Line	Survey/Mapping: BARDIT DITCH BARRIER Element type: Line	Survey/Mapping: BARDTB DITCH AND BERM BARRIER Element type: Line
Survey/Mapping: BARGEN GENERIC SECURITY BARRIER Element type: Line	Survey/Mapping: BARMAS SECURITY MASONRY BARRIER Element type: Line	Survey/Mapping: CMP12 CMP 12IN DIA LINEAR Element type: Line
Survey/Mapping: CMPU12 CMPU 12IN DIA LINEAR Element type: Line	Survey/Mapping: COMARX EXIST COMMUNICATION AERIAL Element type: Line	Survey/Mapping: COMUGX EXIST COMMUNICATION UNDERG Element type: Line

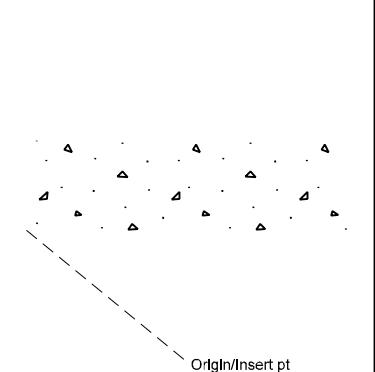
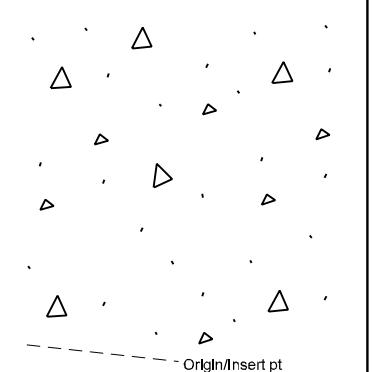
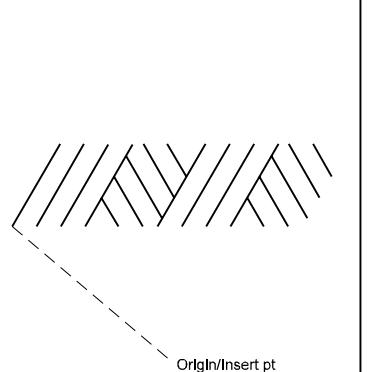
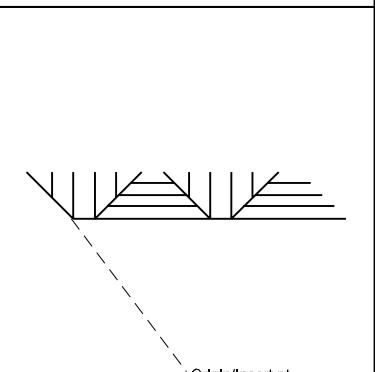
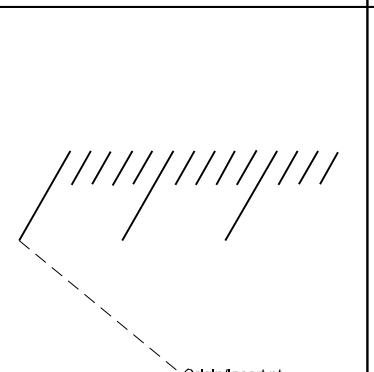
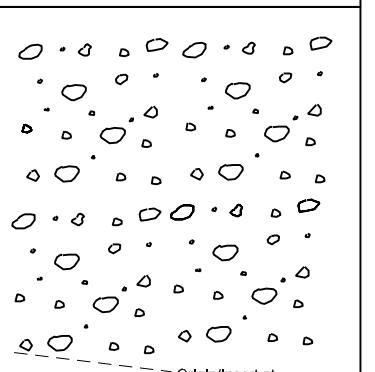
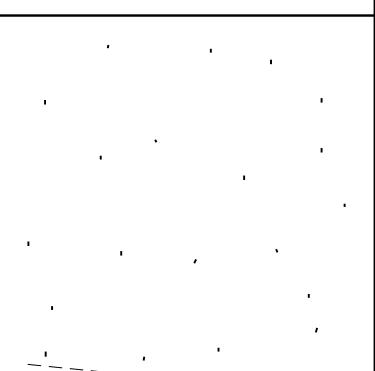
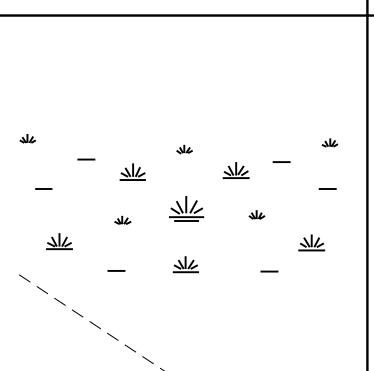
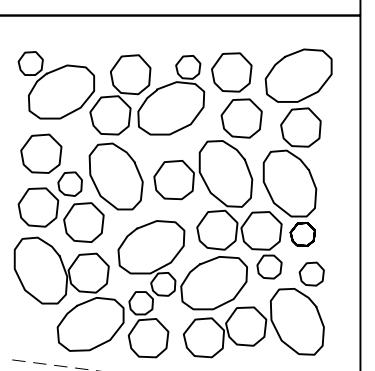
Survey/Mapping: CONLMT CONSTRUCTION LIMIT Element type: Line	Survey/Mapping: CULVRT CULVERT PIPE Element type: Line	Survey/Mapping: DITCH DITCH LINE Element type: Line
Survey/Mapping: EPARX EXIST ELEC AERIAL PRIMARY Element type: Line	Survey/Mapping: EPUGX EXIST ELEC UNDERG PRIMARY Element type: Line	Survey/Mapping: ESARX EXIST ELEC AERIAL SEC Element type: Line
Survey/Mapping: ESUGX EXIST ELEC UNDERG SEC Element type: Line	Survey/Mapping: EUDUCX EXIST UNDERGROUND DUCT BANK Element type: Line	Survey/Mapping: FENCE FENCE Element type: Line

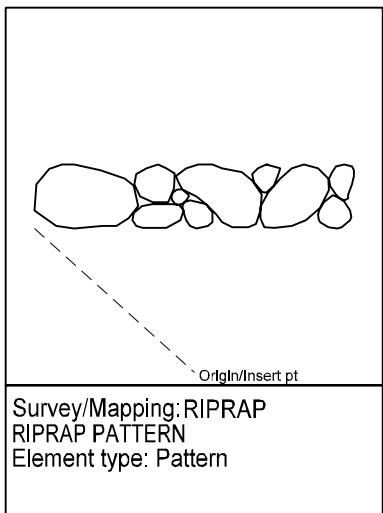
	— F O —	— F —	— F O R —
Survey/Mapping:FIBOPT FIBER OPTICS LINE Element type: Line	Survey/Mapping:FIRE FIRE PROTECTION WATER SUPPLY Element type: Line	Survey/Mapping:FUELOR FUEL OIL RETURN Element type: Line	
— F O S —	— F O V —	—	<input type="checkbox"/>
Survey/Mapping:FUELOS FUEL OIL SUPPLY Element type: Line	Survey/Mapping:FUELOV FUEL OIL TANK VENT Element type: Line	Survey/Mapping:GUARD GUARD RAIL Element type: Line	
	— I N W —	— L P G —	
Survey/Mapping:IDXDC INDEX DEPTH CONTOUR Element type: Line	Survey/Mapping:IWASTE INDUSTRIAL WASTE Element type: Line	Survey/Mapping:LIQPET LIQUID PETROLEUM GAS Element type: Line	

	— N P W —	— G _X —
Survey/Mapping:MINRDC MINOR DEPTH CONTOUR Element type: Line	Survey/Mapping:NONPOT NONPOTABLE WATER Element type: Line	Survey/Mapping:NTGASX EXISTING NATURAL GAS Element type: Line
— - - - -	— P L —	++ + + + + + +
Survey/Mapping:PROJBL PROJECT BOUNDARY LINE Element type: Line	Survey/Mapping:PROPL PROPERTY LINE Element type: Line	Survey/Mapping:RAILS SINGLE RAILROAD Element type: Line
— R / W —	— S S _X —	— S D _X —
Survey/Mapping:RTOFWY RIGHT OF WAY Element type: Line	Survey/Mapping:SSWAFX EXISTING SANITARY SEWER Element type: Line	Survey/Mapping:STRAFX EXISTING STORM DRAIN Element type: Line

	
Survey/Mapping: TREEL TREE LINE Element type: Line	Survey/Mapping: WATRX EXISTING WATER LINE Element type: Line

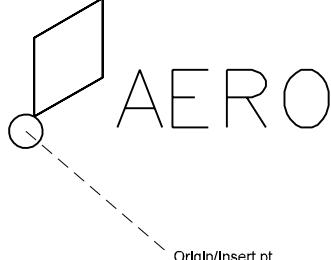
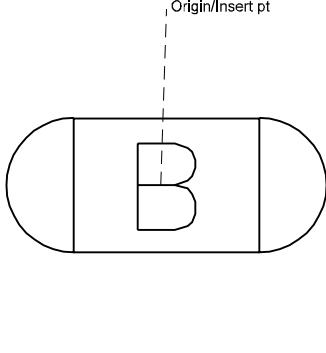
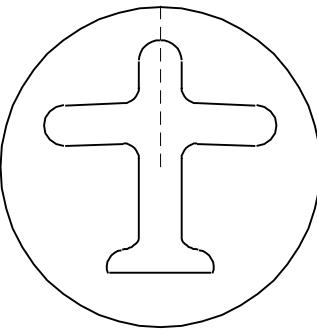
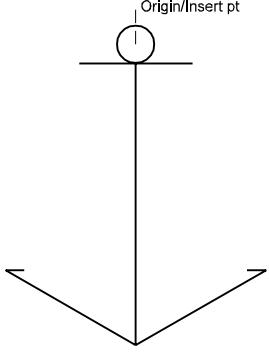
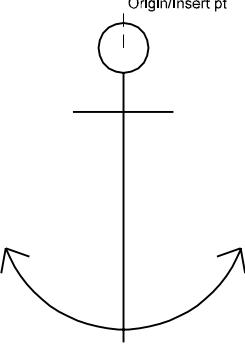
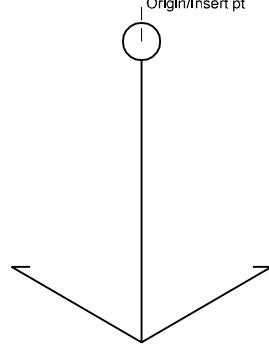
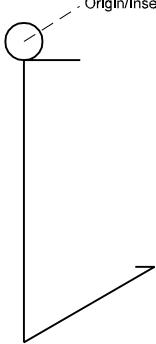
3 Survey/Mapping Patterns Library

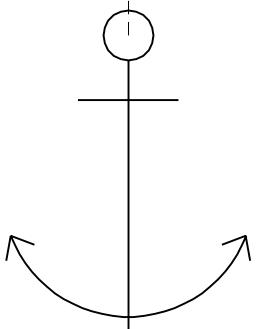
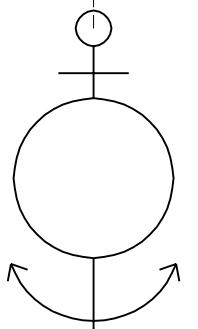
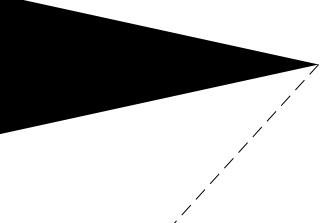
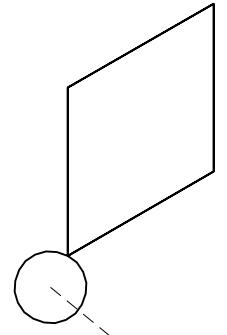
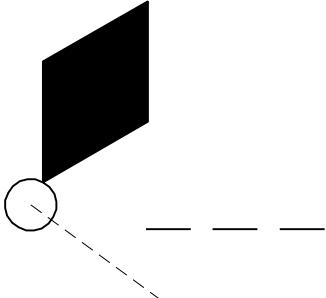
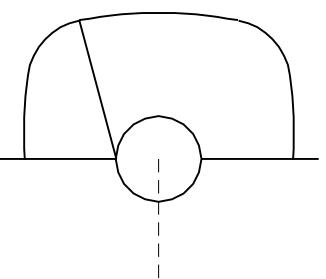
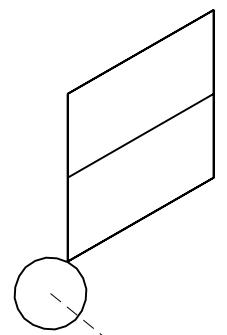
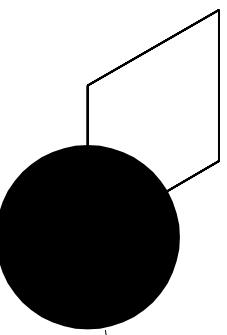
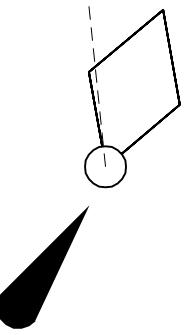
		
Survey/Mapping: CONC CONCRETE Element type: Pattern	Survey/Mapping: CONCST CONCRETE STONE Element type: Pattern	Survey/Mapping: EEARHT EXISTING EARTH Element type: Pattern
		
Survey/Mapping: EROCK EXISTING ROCK Element type: Pattern	Survey/Mapping: FILLSC FILL SECTION Element type: Pattern	Survey/Mapping: GRAVEL GRAVEL Element type: Pattern
		
Survey/Mapping: GROUT GROUT Element type: Pattern	Survey/Mapping: LSWAMP LARGE SWAMP Element type: Pattern	Survey/Mapping: POROUS POROUS Element type: Pattern

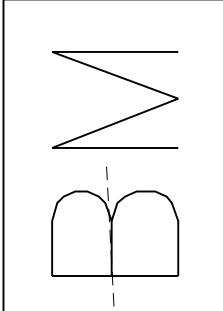
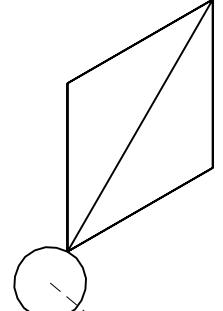
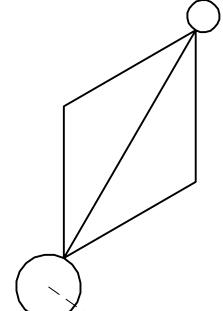
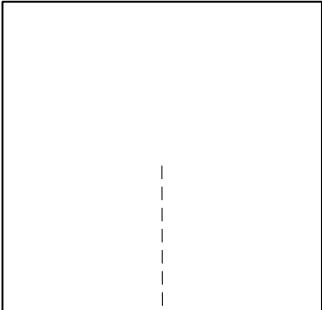
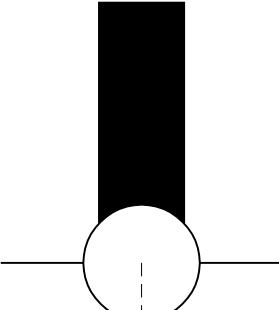
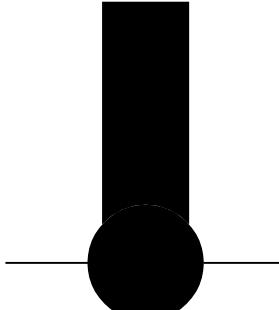
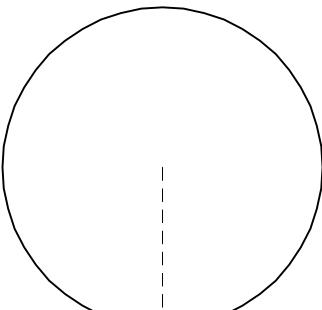
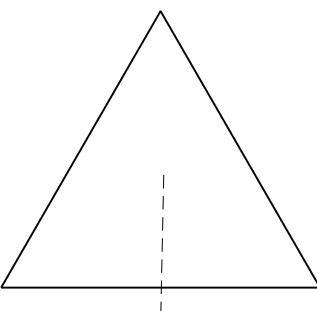
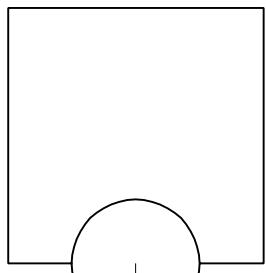


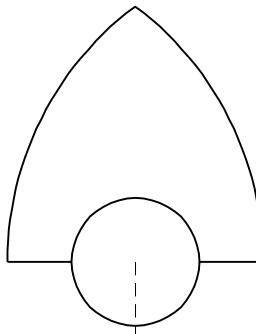
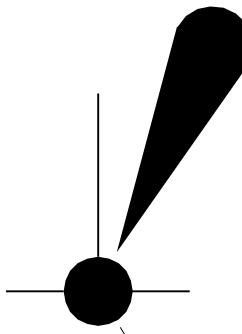
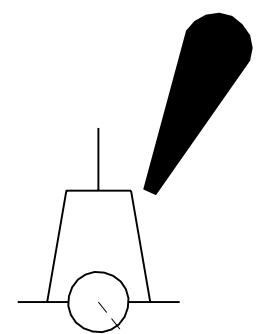
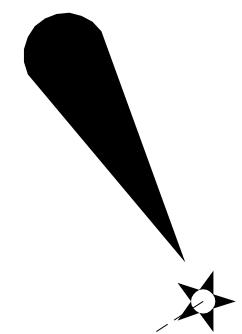
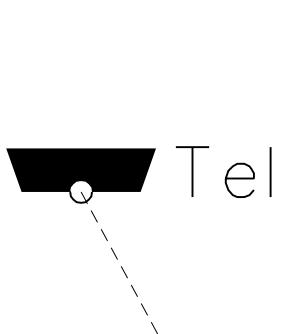
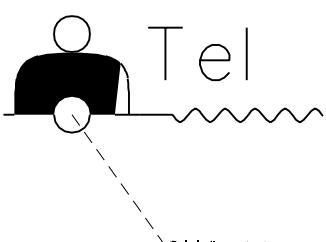
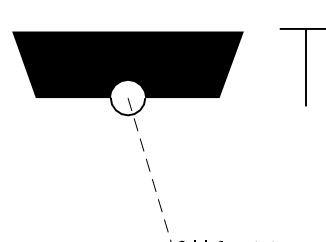
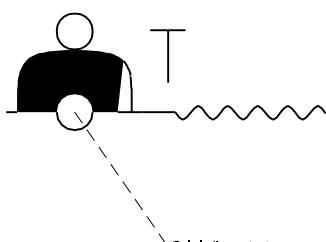
Survey/Mapping: RIPRAP
RIPRAP PATTERN
Element type: Pattern

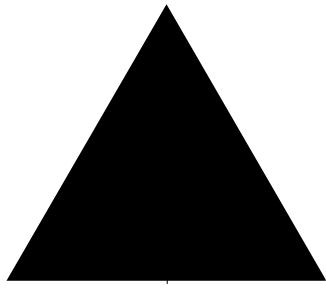
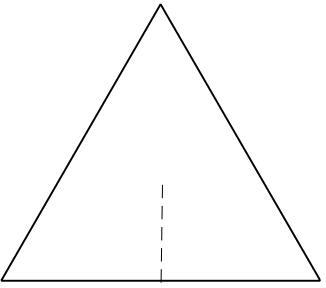
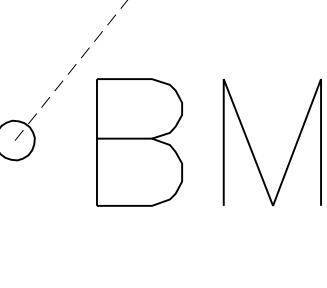
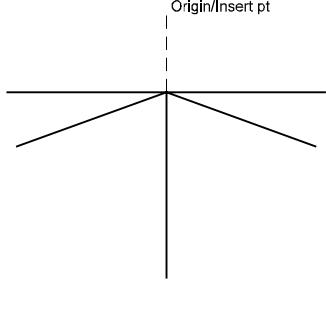
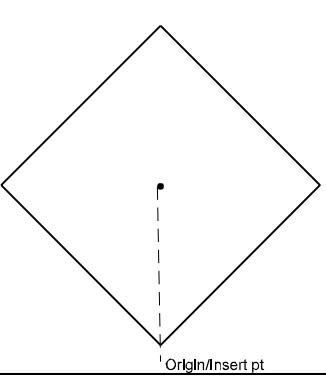
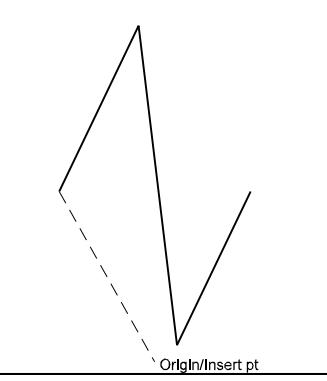
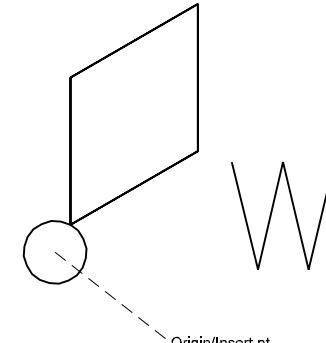
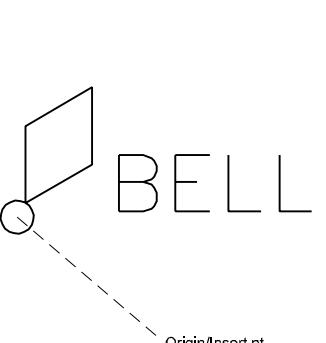
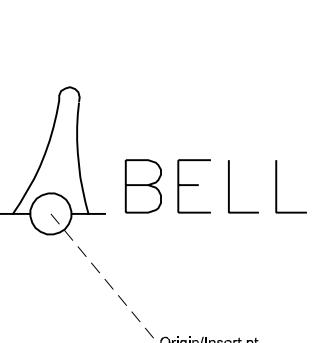
3 Survey/Mapping Symbols Library

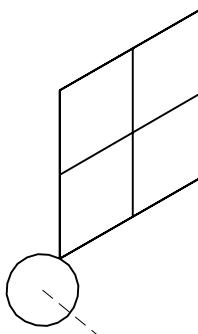
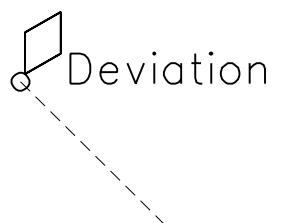
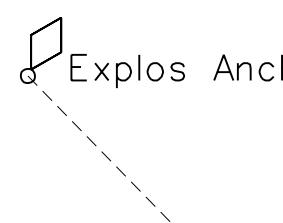
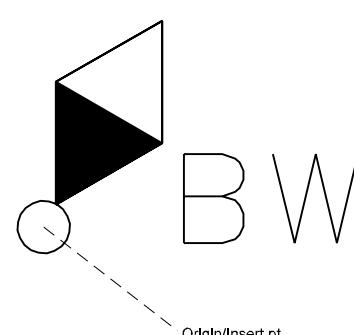
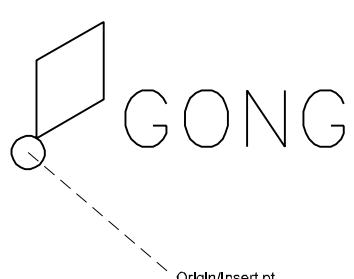
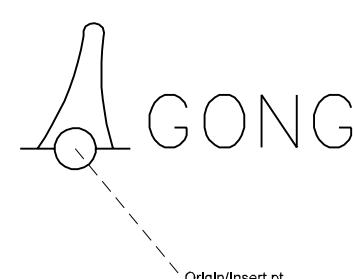
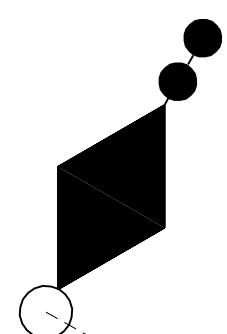
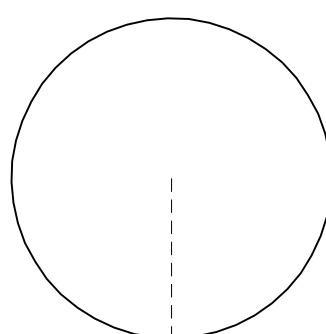
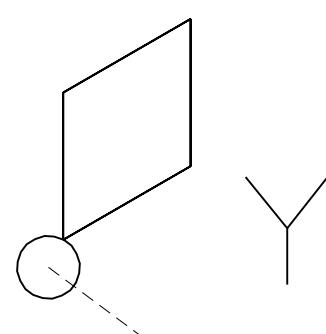
		
<p>Survey/Mapping: ACLLEL APPROACH LIGHTBAR_ELEVATED Element type: Symbol</p>	<p>Survey/Mapping: ACLLSF APPROACH LIGHTBAR_SEMIFLUSH Element type: Symbol</p>	<p>Survey/Mapping: AERO SEAPLANE ANCHORAGE BUOY Element type: Symbol</p>
		
<p>Survey/Mapping: AFBCN AIRFIELD BEACON Element type: Symbol</p>	<p>Survey/Mapping: AIRFLD AIRFIELD SYMBOL Element type: Symbol</p>	<p>Survey/Mapping: ANCHR1 ANCHORAGE LARGE VESSEL Element type: Symbol</p>
		
<p>Survey/Mapping: ANCHR2 ANCHORAGE LARGE VESSEL Element type: Symbol</p>	<p>Survey/Mapping: ANCHR3 ANCHORAGE SMALL VESSEL Element type: Symbol</p>	<p>Survey/Mapping: ANCHR4 ANCHORAGE SMALL VESSEL Element type: Symbol</p>

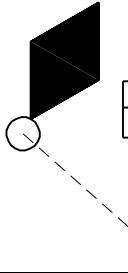
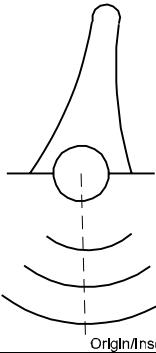
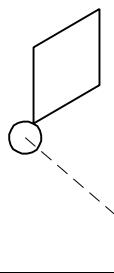
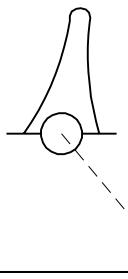
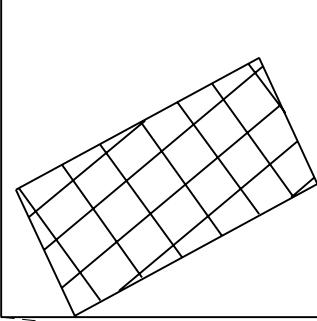
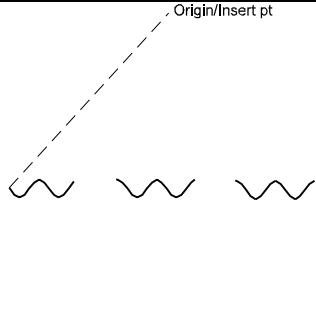
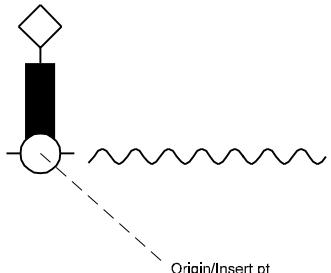
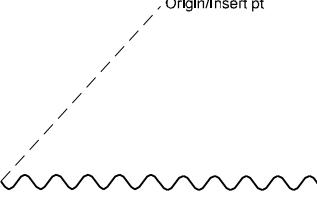
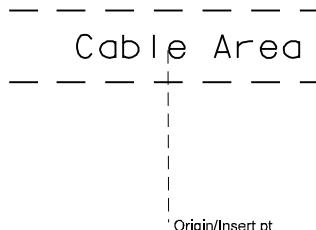
 <p>Origin/Insert pt</p> <p>Survey/Mapping: ANCHR5 ANCHORAGE SMALL VESSEL Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: ANCHRB ANCHOR BERTH Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: ARROW ARROW TERMINATOR Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Survey/Mapping: BAR1 BARREL BUOY Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: BAR1C BARREL BUOY INDICATE COLOR Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: BAR2 BARREL BUOY Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Survey/Mapping: BARD DIAG STRIPE BARREL BUOY Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: BARLT1 LIGHTED BARREL BUOY Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Survey/Mapping: BARLT2 LIGHTED BARREL BUOY Element type: Symbol</p>

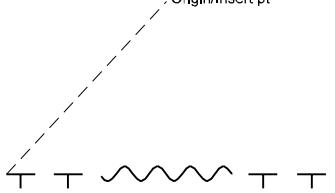
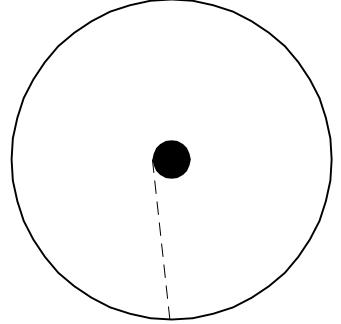
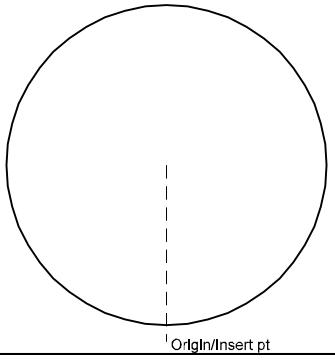
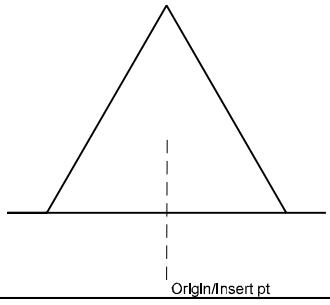
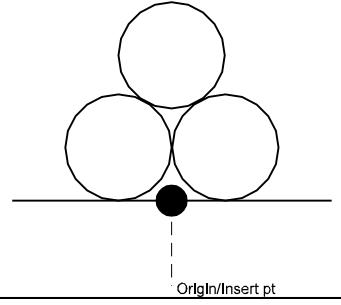
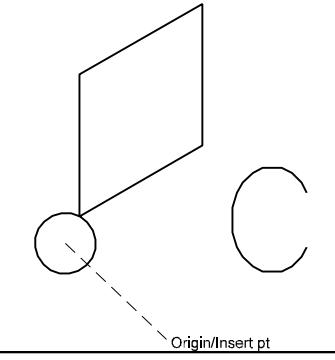
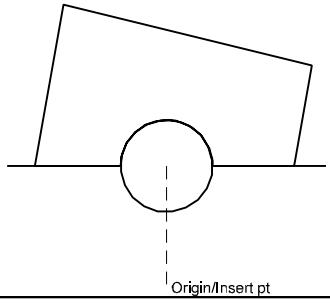
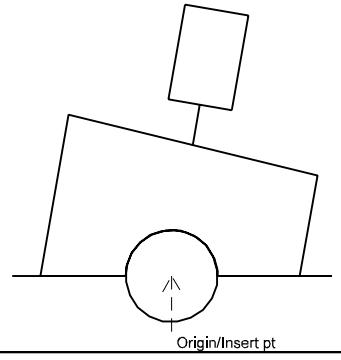
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Survey/Mapping: BARMKR BARRIER MARKER Element type: Symbol</p>	<p>Survey/Mapping: BARV VERT STRIPE BARREL BUOY Element type: Symbol</p>	<p>Survey/Mapping: BARVT V STRP BARREL BUOY W TOPMK Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Survey/Mapping: BCN1 GENERAL BEACON Element type: Symbol</p>	<p>Survey/Mapping: BCN2 GENERAL BEACON Element type: Symbol</p>	<p>Survey/Mapping: BCN3 GENERAL BEACON Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Survey/Mapping: BCN4 GENERAL BEACON Element type: Symbol</p>	<p>Survey/Mapping: BCN5 GENERAL BEACON Element type: Symbol</p>	<p>Survey/Mapping: BCNBY1 BUOYANT BEACON Element type: Symbol</p>

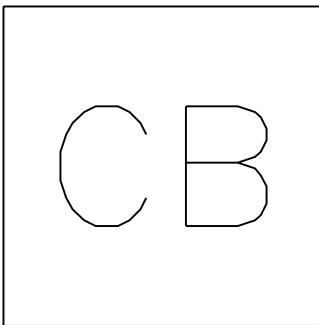
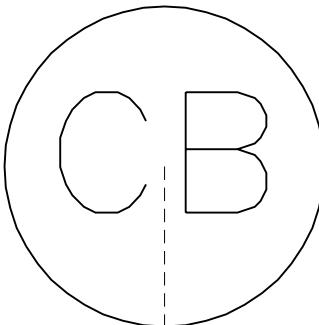
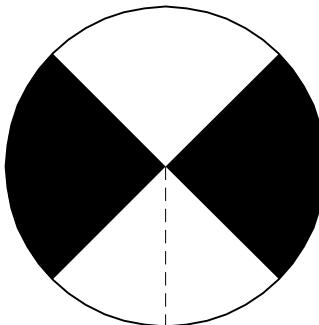
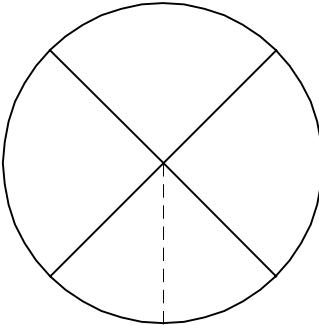
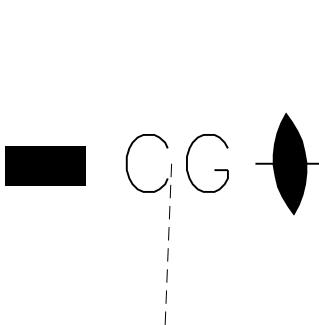
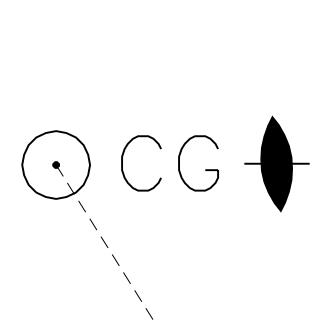
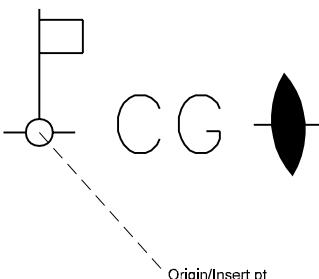
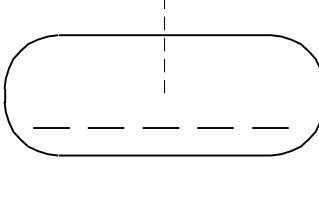
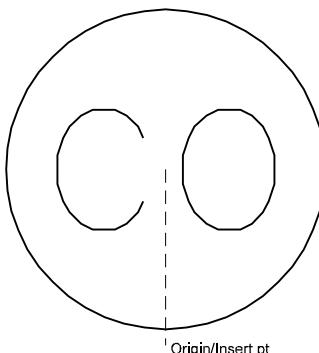
		
Survey/Mapping: BCBNBY2 BUOYANT BEACON Element type: Symbol	Survey/Mapping: BCNLT1 LIGHTED BEACON Element type: Symbol	Survey/Mapping: BCNLT2 LIGHTED BEACON Element type: Symbol
		
Survey/Mapping: BCNLT3 LIGHTED BEACON Element type: Symbol	Survey/Mapping: BCNRES RESILIENT BEACON Element type: Symbol	Survey/Mapping: BCNTG1 TELEGRAPHIC MOORING BEACON Element type: Symbol
		
Survey/Mapping: BCNTG2 TELEGRAPHIC MOORING BEACON Element type: Symbol	Survey/Mapping: BCNTP1 TELEPHONIC MOORING BEACON Element type: Symbol	Survey/Mapping: BCNTP2 TELEPHONIC MOORING BEACON Element type: Symbol

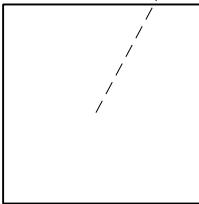
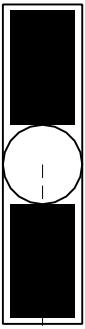
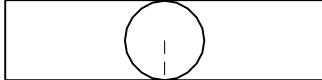
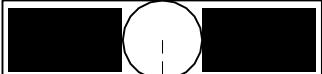
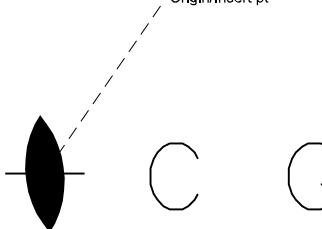
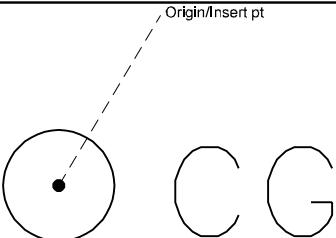
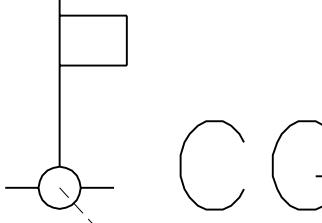
		
<p>Survey/Mapping: BCNTR1 TRIANGULAR BEACON Element type: Symbol</p>	<p>Survey/Mapping: BCNTR2 TRIANGULAR BEACON Element type: Symbol</p>	<p>Survey/Mapping: BM BENCH MARK Element type: Symbol</p>
		
<p>Survey/Mapping: BMALT BENCH MARK ALTERNATE Element type: Symbol</p>	<p>Survey/Mapping: BNDMRK BOUNDARY MARK Element type: Symbol</p>	<p>Survey/Mapping: BREAK BREAK LINE SYMBOL Element type: Symbol</p>
		
<p>Survey/Mapping: BYANCH ANCHORAGE BUOY Element type: Symbol</p>	<p>Survey/Mapping: BYBELB BELL BARREL BUOY Element type: Symbol</p>	<p>Survey/Mapping: BYBELP BELL PILLAR BUOY Element type: Symbol</p>

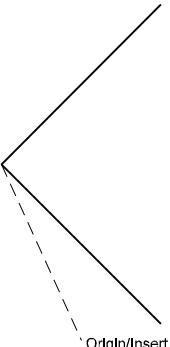
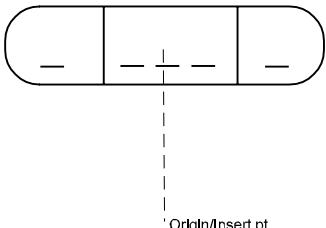
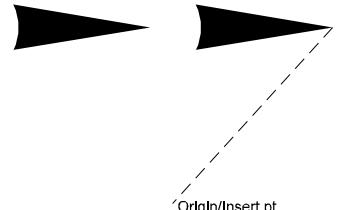
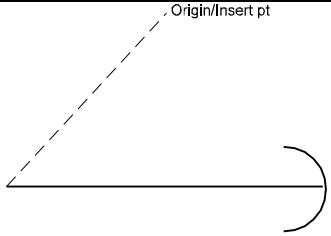
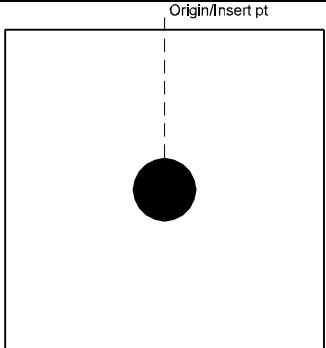
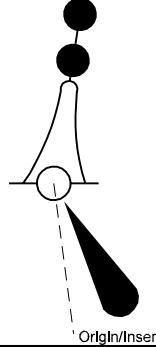
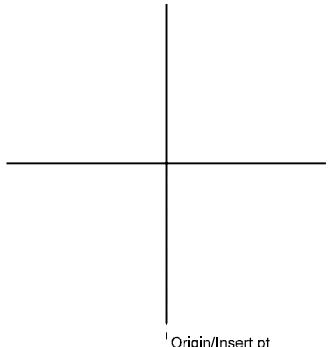
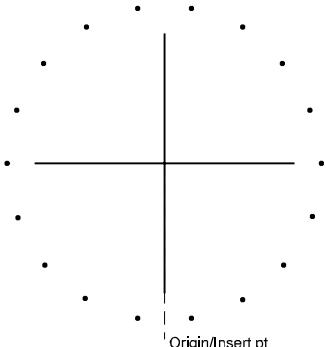
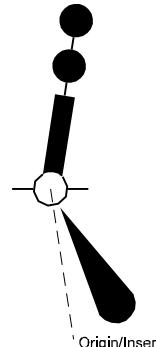
	 Deviation	 Explos Anch
Survey/Mapping: BYCHEC CHECKERED BUOY Element type: Symbol	Survey/Mapping: BYCOMP COMPASS ADJUSTMENT BUOY Element type: Symbol	Survey/Mapping: BYEXPL EXPLOSIVE ANCHORAGE BUOY Element type: Symbol
	 GONG	 GONG
Survey/Mapping: BYFISH FISH TRAP BUOY Element type: Symbol	Survey/Mapping: BYGONB GONG BARREL BUOY Element type: Symbol	Survey/Mapping: BYGONP GONG PILLAR BUOY Element type: Symbol
	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: BYJUNC JUNCTION BUOY Element type: Symbol	Survey/Mapping: BYPOS POSITION OF BUOY Element type: Symbol	Survey/Mapping: BYQUAR QUARANTINE BUOY Element type: Symbol

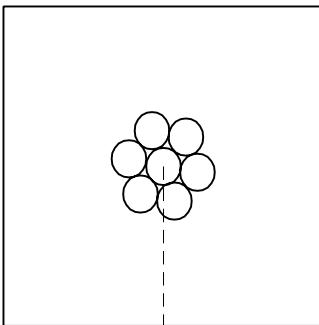
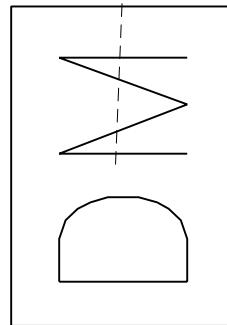
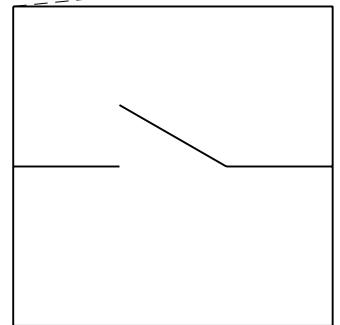
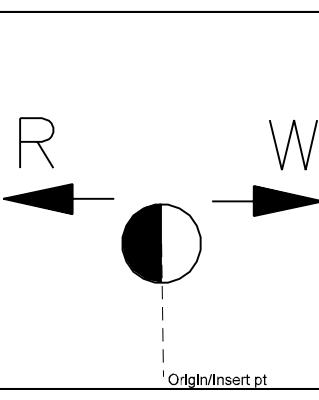
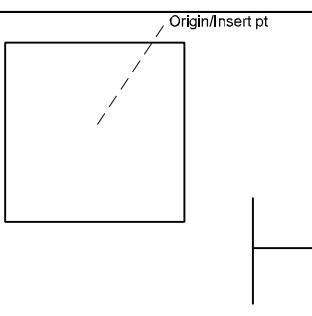
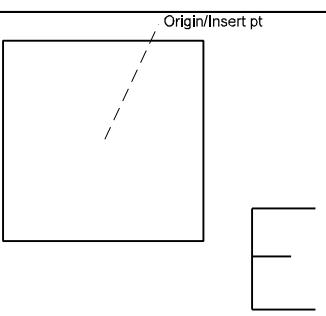
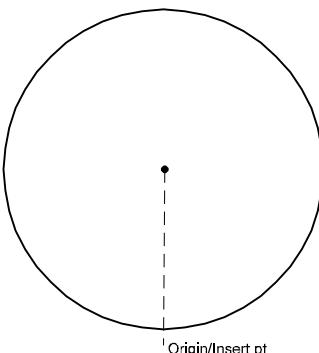
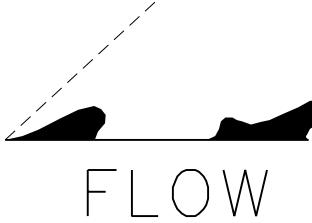
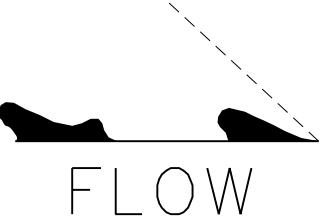
 <p>BELL</p> <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>WHIS</p> <p>Origin/Insert pt</p>
<p>Survey/Mapping: BYWAV1 WAVE ACTUATED BELL BUOY Element type: Symbol</p>	<p>Survey/Mapping: BYWAV2 WAVE ACTUATED BELL BUOY Element type: Symbol</p>	<p>Survey/Mapping: BYWHIB WHISTLE BARREL BUOY Element type: Symbol</p>
 <p>WHIS</p> <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Survey/Mapping: BYWHIP WHISTLE PILLAR BUOY Element type: Symbol</p>	<p>Survey/Mapping: CABCNZ CABLE CROSSING ZONE Element type: Symbol</p>	<p>Survey/Mapping: CABDIS DISUSED SUBMARINE CABLE Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Cable Area</p> <p>Origin/Insert pt</p>
<p>Survey/Mapping: CABLAN CABLE LANDING BEACON Element type: Symbol</p>	<p>Survey/Mapping: CABLE SUBMARINE CABLE Element type: Symbol</p>	<p>Survey/Mapping: CABLE1 SUBMARINE CABLE AREA Element type: Symbol</p>

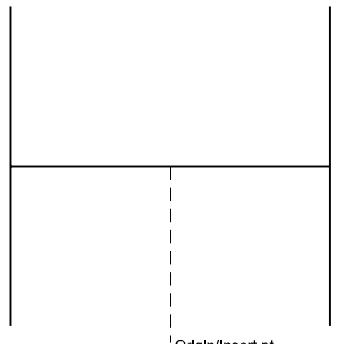
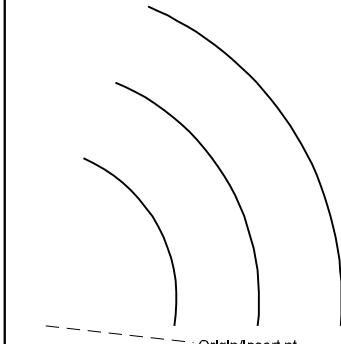
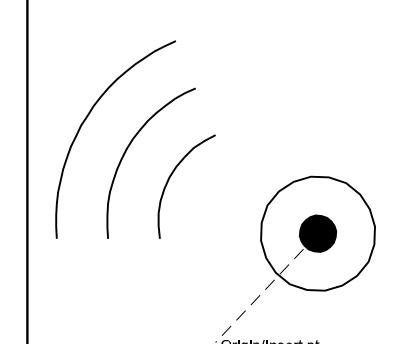
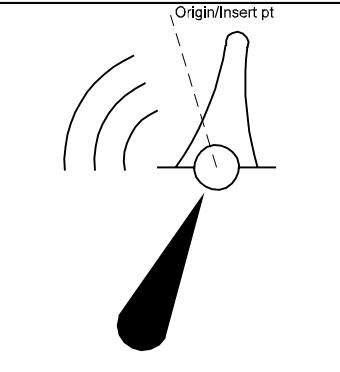
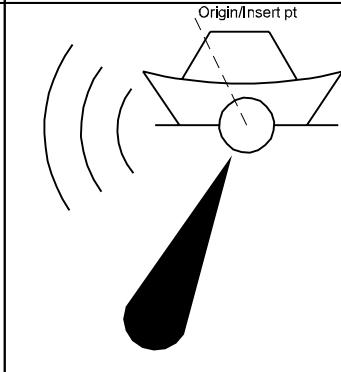
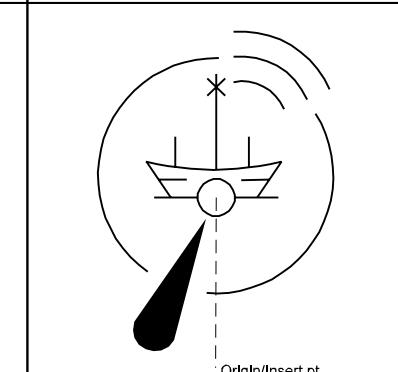
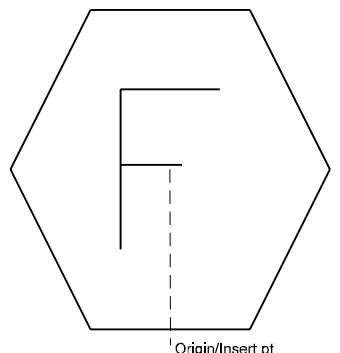
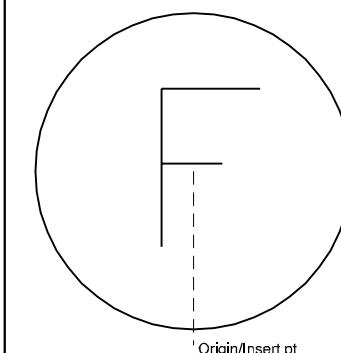
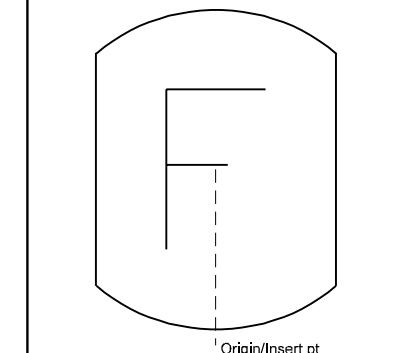
		
Survey/Mapping: CABLE2 SUBMARINE CABLE AREA Element type: Symbol	Survey/Mapping: CABPWR SUBMARINE POWER CABLE Element type: Symbol	Survey/Mapping: CAIRN1 CAIRN Element type: Symbol
		
Survey/Mapping: CAIRN2 CAIRN Element type: Symbol	Survey/Mapping: CAIRN3 CAIRN Element type: Symbol	Survey/Mapping: CAIRN4 CAIRN Element type: Symbol
		
Survey/Mapping: CAN1 CAN BUOY Element type: Symbol	Survey/Mapping: CAN2 CAN BUOY Element type: Symbol	Survey/Mapping: CANWT WHITE CAN BUOY W TOPMARK Element type: Symbol

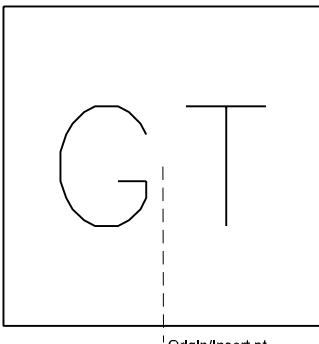
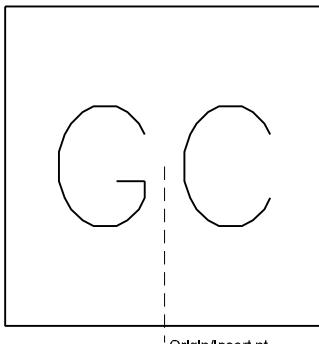
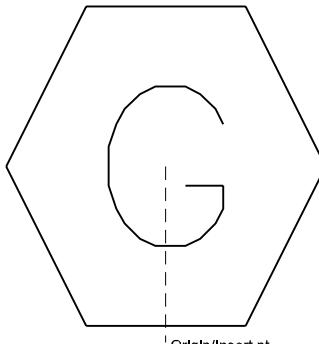
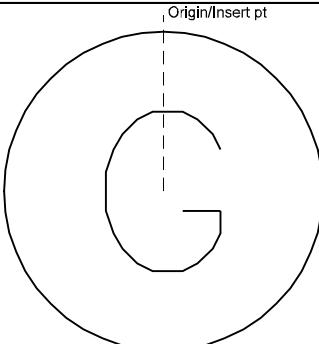
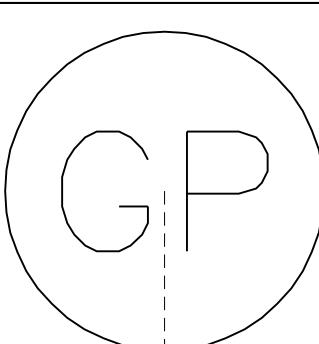
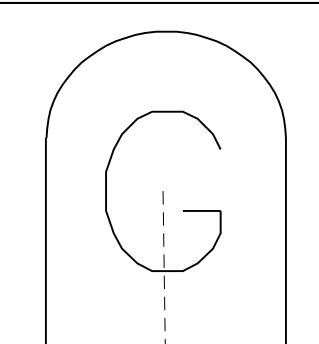
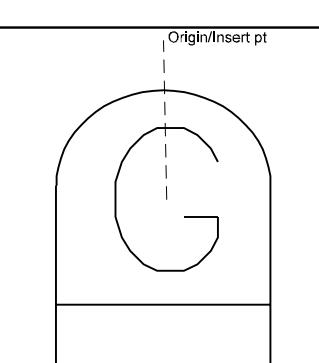
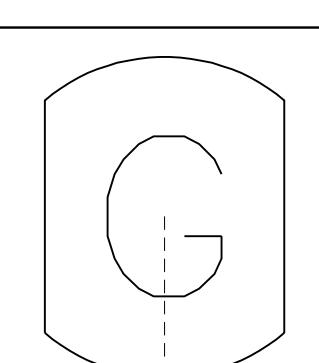
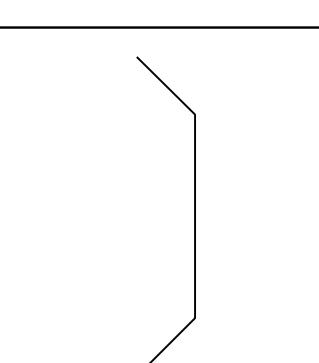
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: CATBSN CATCH BASIN Element type: Symbol	Survey/Mapping: CATBSR ROUND CATCH BASIN Element type: Symbol	Survey/Mapping: CDHDR CORE DRILL HOLE DRILLED Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: CDHUDR CORE DRILL HOLE UNDRILLED Element type: Symbol	Survey/Mapping: CGRES1 COAST GUARD RESCUE STA Element type: Symbol	Survey/Mapping: CGRES2 COAST GUARD RESCUE STA Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: CGRES3 COAST GUARD RESCUE STA Element type: Symbol	Survey/Mapping: CKTID CIRCUIT ID SYMBOL Element type: Symbol	Survey/Mapping: CLNOUT CLEANOUT Element type: Symbol

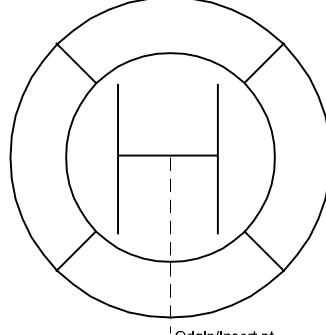
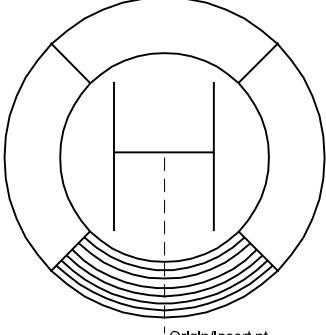
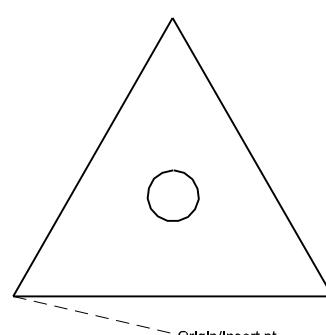
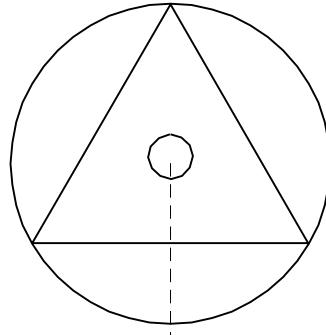
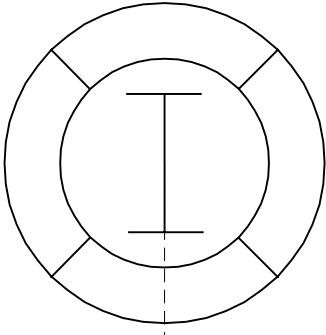
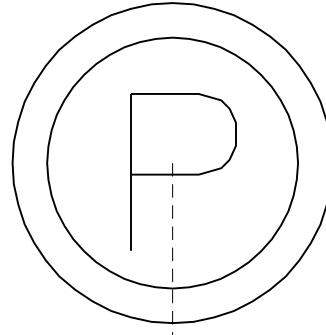
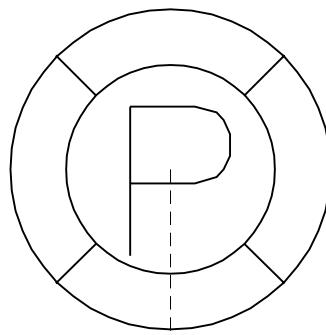
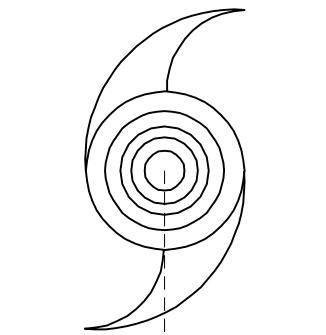
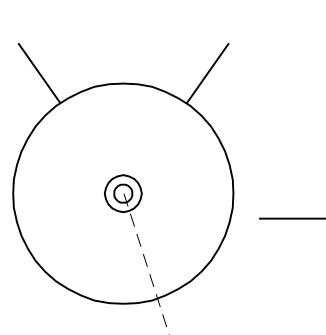
 C	 	
Survey/Mapping: CMHLX COMMOMANHOLE_EXIST Element type: Symbol	Survey/Mapping: CNR90 CORNER SOLID 90 Element type: Symbol	Survey/Mapping: CNRNF CORNER NOT FOUND Element type: Symbol
 	 	
Survey/Mapping: CNRSF CORNER SOLID FLAT Element type: Symbol	Survey/Mapping: CNTLIN CENTERLINE SYMBOL Element type: Symbol	Survey/Mapping: COAST1 COAST GUARD STATION Element type: Symbol
 	 	
Survey/Mapping: COAST2 COAST GUARD STATION Element type: Symbol	Survey/Mapping: COAST3 COAST GUARD STATION Element type: Symbol	Survey/Mapping: COAST4 COAST GUARD STATION Element type: Symbol

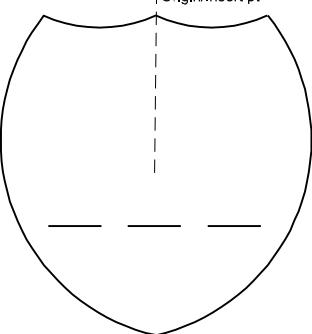
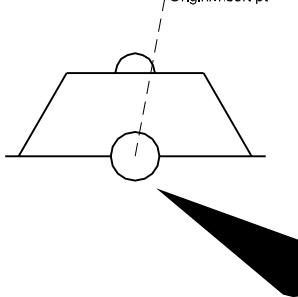
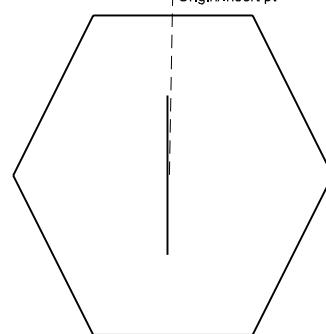
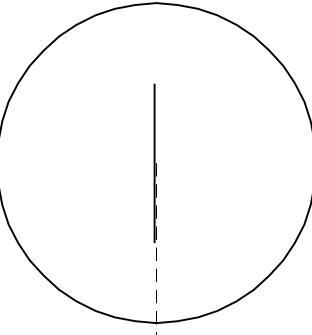
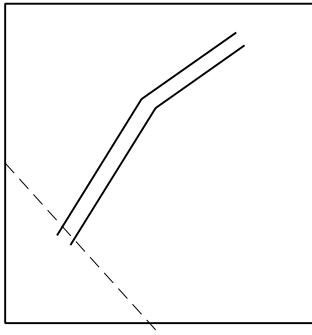
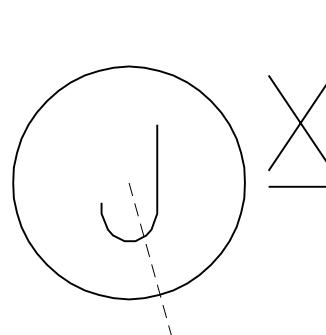
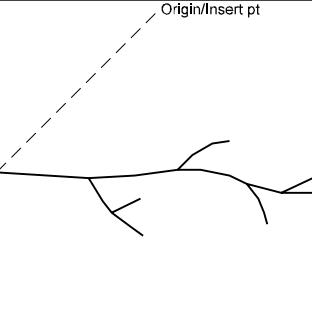
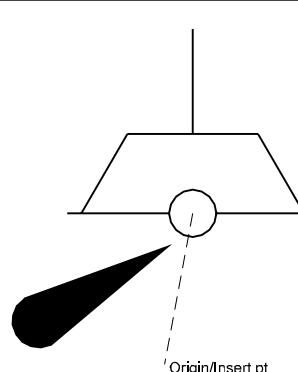
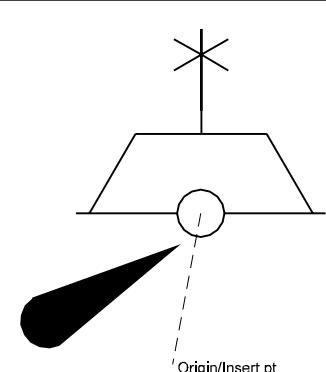
		
Survey/Mapping: CULVEE CULVERT END SYMBOL Element type: Symbol	Survey/Mapping: DBID DUCTBANK ID SYMBOL Element type: Symbol	Survey/Mapping: DBLARR DOUBLE ARROW TERMINATOR Element type: Symbol
		
Survey/Mapping: DGUYX DOWNGUY_EXISTING Element type: Symbol	Survey/Mapping: DISPLT DISUSED PLATFORM Element type: Symbol	Survey/Mapping: DNGPB LIGHTED DANGER BUOY PILLAR Element type: Symbol
		
Survey/Mapping: DNGRK DANGER U W ROCK DEPTH UNKNW Element type: Symbol	Survey/Mapping: DNGRK1 DANGER U W ROCK DEPTH UNKWN Element type: Symbol	Survey/Mapping: DNGSB LIGHTED DANGER BUOY SPAR Element type: Symbol

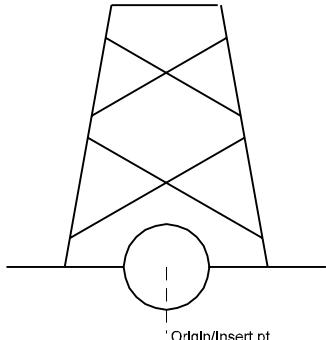
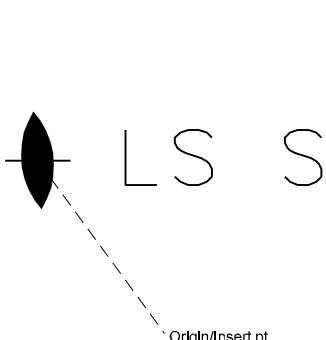
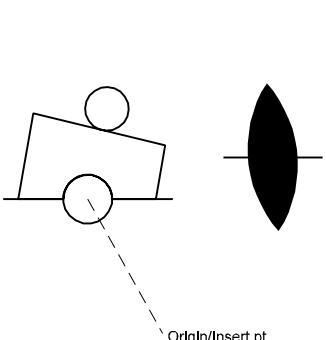
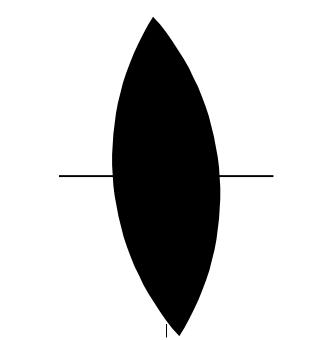
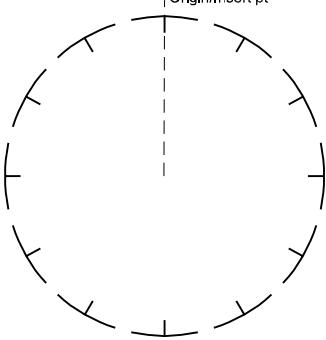
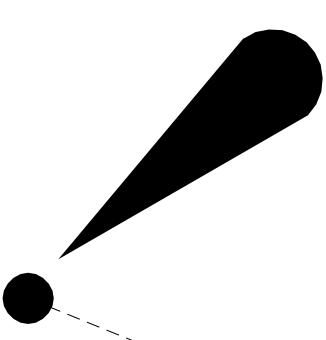
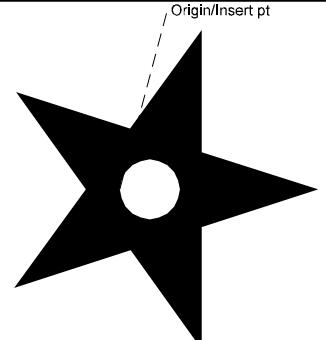
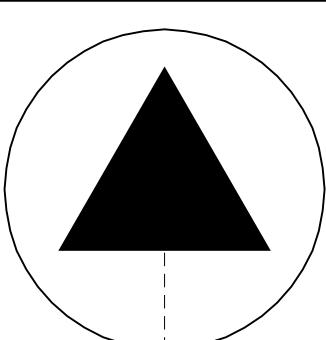
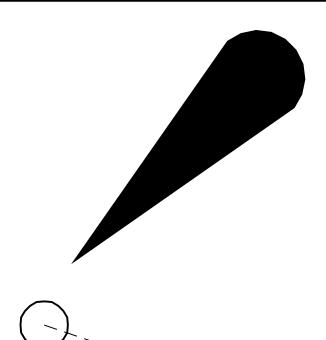
		
Survey/Mapping: DOLPHIN DOLPHIN Element type: Symbol	Survey/Mapping: DSTMKR RW DISTANCE MARKER Element type: Symbol	Survey/Mapping: DSWTCH DIST SWITCH SWITCHING STAT Element type: Symbol
		
Survey/Mapping: DTHL DISPLACE THRESHOLD LIGHT Element type: Symbol	Survey/Mapping: EHHLX ELEC HANDHOLE_EXIST Element type: Symbol	Survey/Mapping: EMHLX ELEC MANHOLE_EXIST Element type: Symbol
		
Survey/Mapping: FIXPNT FIXED POINT Element type: Symbol	Survey/Mapping: FLARRL FLOW ARROW LEFT IN 0 POINT Element type: Symbol	Survey/Mapping: FLARRR FLOW ARROW RIGHT IN 0 POINT Element type: Symbol

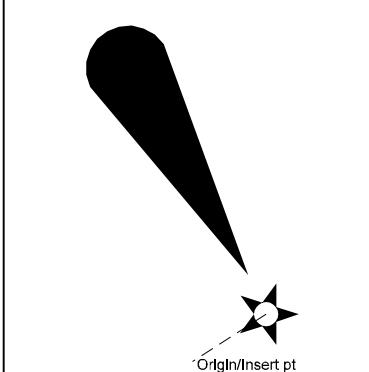
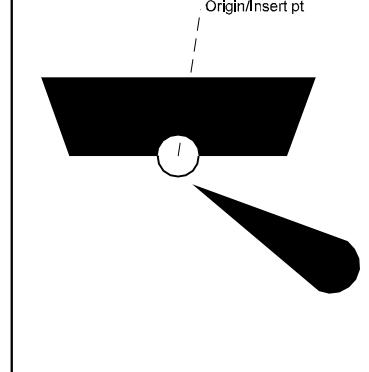
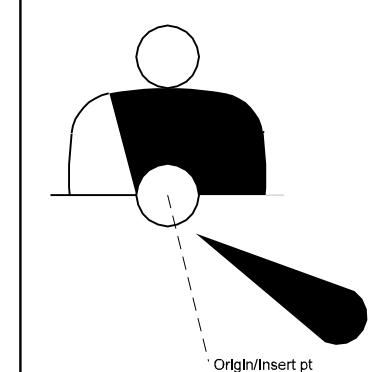
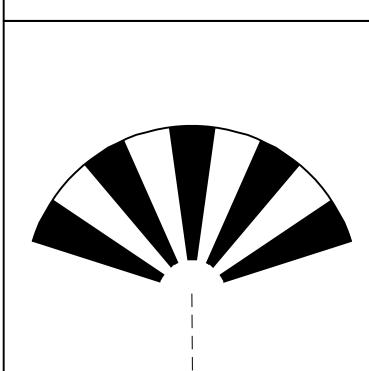
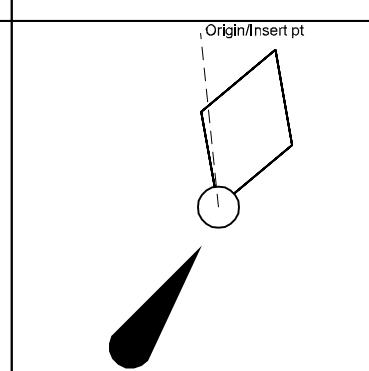
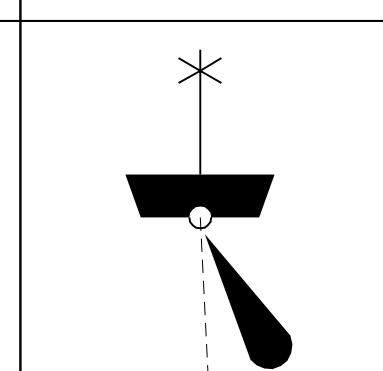
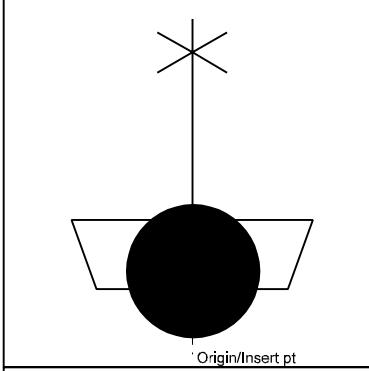
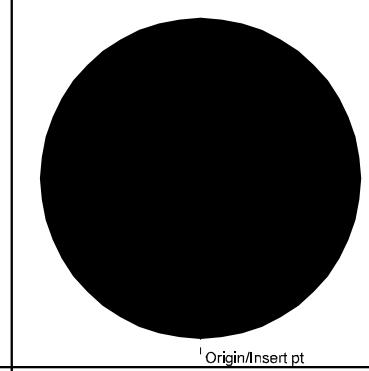
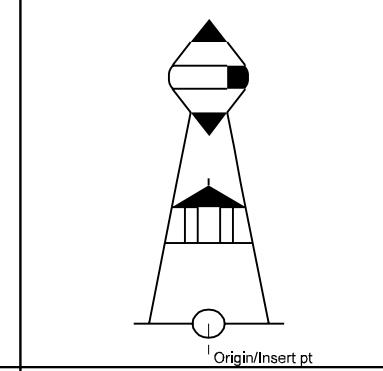
		
Survey/Mapping: FLDGAT FLOOD GATE Element type: Symbol	Survey/Mapping: FOG FOG SIGNAL Element type: Symbol	Survey/Mapping: FOGBCN FOG SIGNAL BEACON Element type: Symbol
		
Survey/Mapping: FOGBY FOG SIGNAL BUOY Element type: Symbol	Survey/Mapping: FOGLS FOG SIGNAL LIGHT SHIP Element type: Symbol	Survey/Mapping: FOGLSM FOG SIG LIGHT SHIP MANNED Element type: Symbol
		
Survey/Mapping: FOMETR FUEL OIL METER Element type: Symbol	Survey/Mapping: FOMHOL FUEL OIL MANHOLE Element type: Symbol	Survey/Mapping: FOVALT FUEL OIL VAULT Element type: Symbol

		
Survey/Mapping: GREASE GREASE TRAP Element type: Symbol	Survey/Mapping: GRITCH GRIT CHAMBER Element type: Symbol	Survey/Mapping: GSMETR GAS METER Element type: Symbol
		
Survey/Mapping: GSMHOL GAS MANHOLE Element type: Symbol	Survey/Mapping: GSPLNT GAS PLANT Element type: Symbol	Survey/Mapping: GSRECR GAS RECEIVER Element type: Symbol
		
Survey/Mapping: GSTRAP GAS TRAP Element type: Symbol	Survey/Mapping: GSVALT GAS VALVE VAULT Element type: Symbol	Survey/Mapping: HEADWL HEADWALL Element type: Symbol

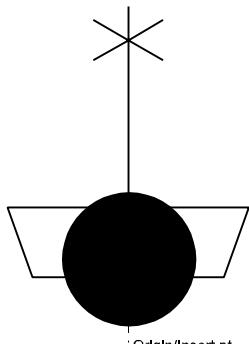
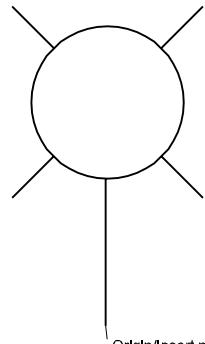
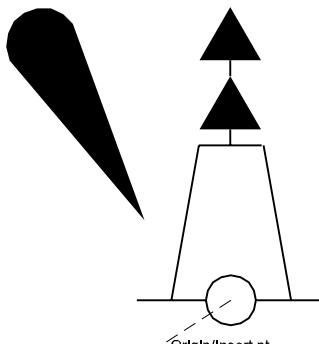
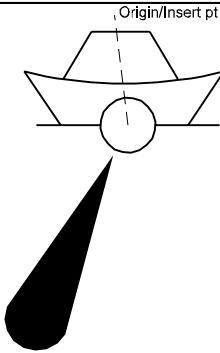
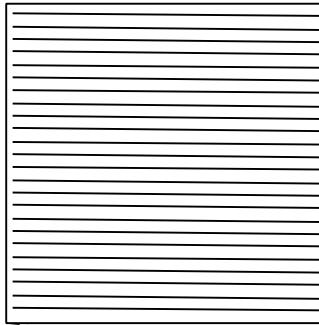
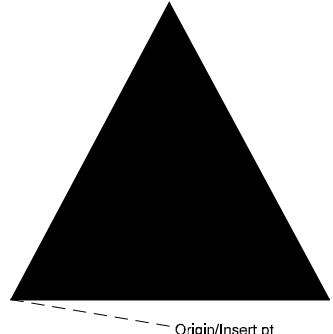
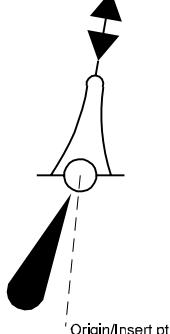
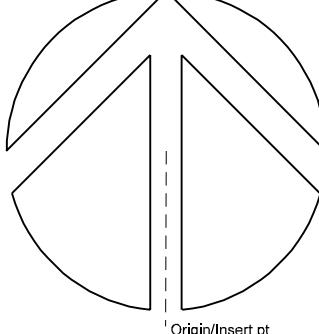
 Survey/Mapping: HLL HOVERLANE Element type: Symbol	 Survey/Mapping: HLLL HOVERLANE LIMIT LIGHT Element type: Symbol	 Survey/Mapping: HORCPT HORIZONTAL CONTROL PT Element type: Symbol
 Survey/Mapping: HOVCPT HORIZ VERT CONTROL PT Element type: Symbol	 Survey/Mapping: HPIL HELIPAD INSET LIGHT Element type: Symbol	 Survey/Mapping: HPPEL HELIPAD PER LIGHT_ELEVATED Element type: Symbol
 Survey/Mapping: HPPLSF HELIPAD PERLIGHT_SEMIFLUSH Element type: Symbol	 Survey/Mapping: HUREYE HURRICANE EYE Element type: Symbol	 Survey/Mapping: HYDRNNT HYDRANT Element type: Symbol

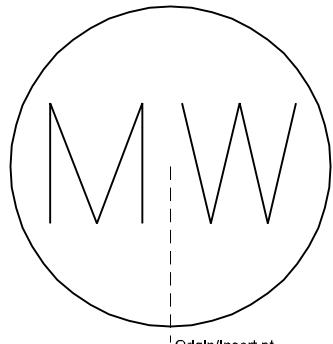
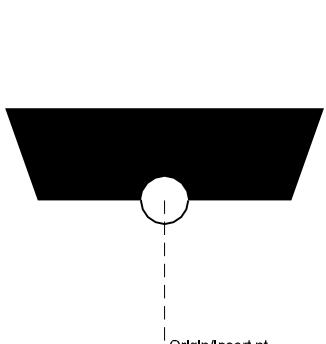
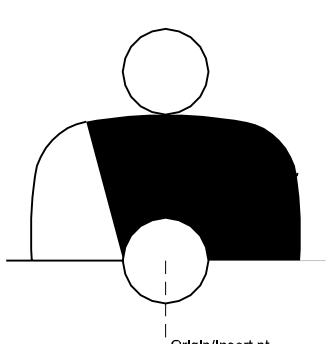
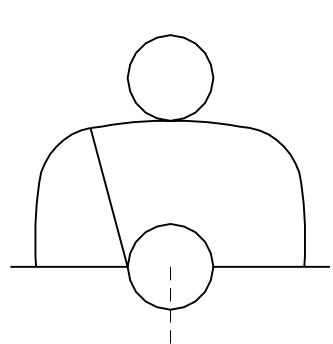
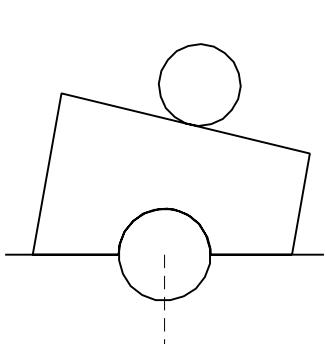
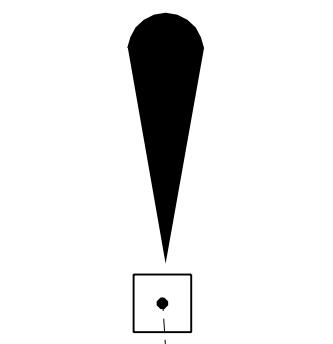
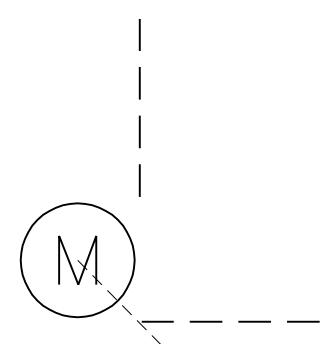
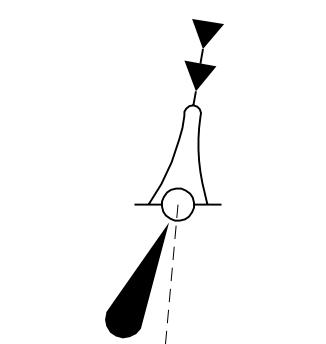
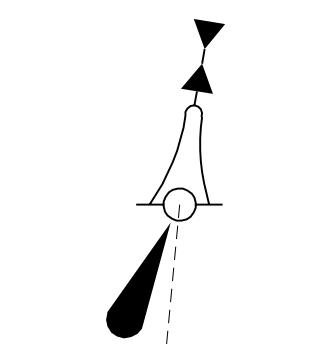
		
Survey/Mapping: INSHWY INTERSTATE HIGHWAY SYMBOL Element type: Symbol	Survey/Mapping: INSTBY OIL GAS INSTALL BUOY Element type: Symbol	Survey/Mapping: IWMETR INDUSTRIAL WASTE WATR METER Element type: Symbol
		
Survey/Mapping: IWMHOL INDUSTRIAL WASTE WATR MANHL Element type: Symbol	Survey/Mapping: JETTY JETTY Element type: Symbol	Survey/Mapping: JNBX EXTERIOR UTIL JUNCTION BOX Element type: Symbol
		
Survey/Mapping: KELP KELP SEAWEED Element type: Symbol	Survey/Mapping: LANBY1 LANBY SUPERBUOY NAVAID Element type: Symbol	Survey/Mapping: LANBY2 LANBY SUPERBUOY NAVAID Element type: Symbol

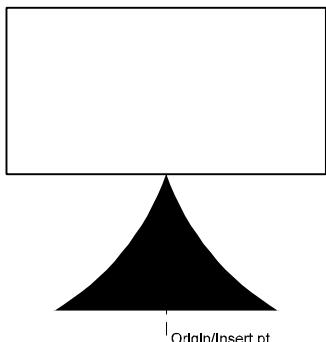
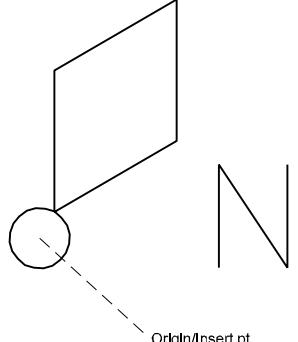
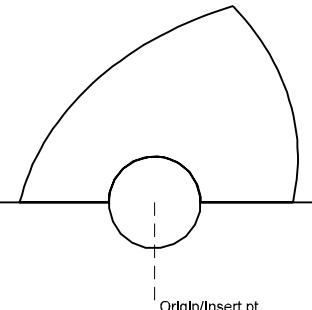
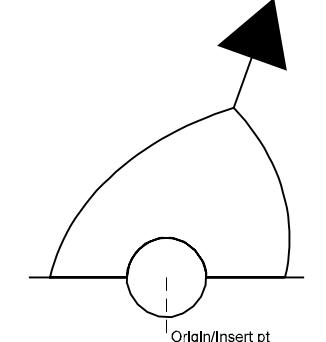
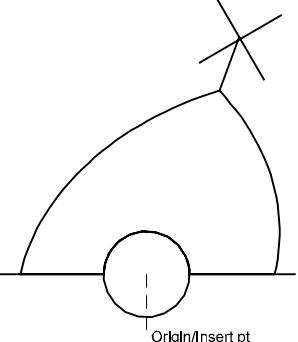
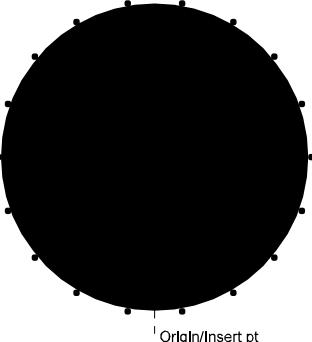
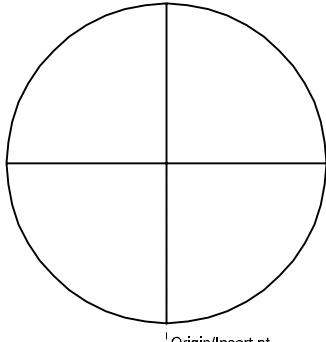
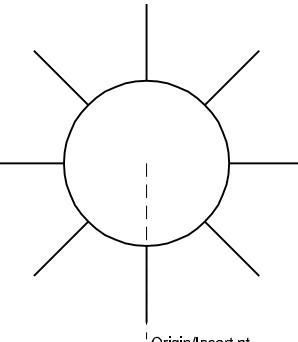
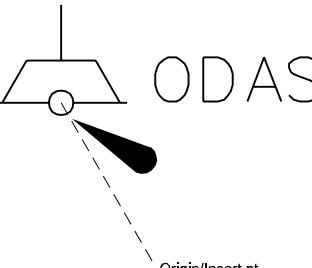
		
Survey/Mapping: LATBCN LATTICE BEACON Element type: Symbol	Survey/Mapping: LIFEBT LIFEBOAT STATION Element type: Symbol	Survey/Mapping: LIFEM1 LIFEBOAT AT MOORING Element type: Symbol
		
Survey/Mapping: LIFEM2 LIFEBOAT AT MOORING Element type: Symbol	Survey/Mapping: LIMIT LIMIT OF SAFETY ZONE Element type: Symbol	Survey/Mapping: LITSV1 FLOATING LIGHT Element type: Symbol
		
Survey/Mapping: LITSV2 FLOATING LIGHT Element type: Symbol	Survey/Mapping: LOOKTR LOOKOUT STATION WATCH Element type: Symbol	Survey/Mapping: LTART ARTICULATED LIGHT Element type: Symbol

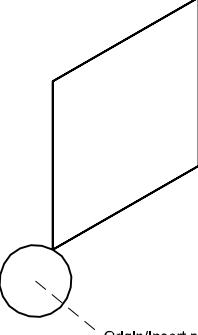
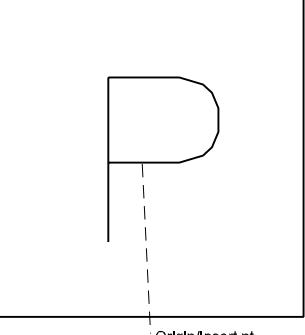
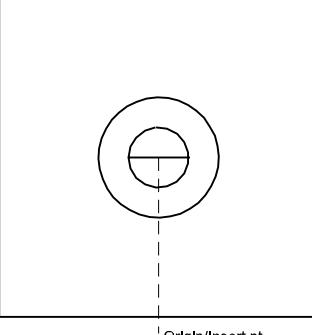
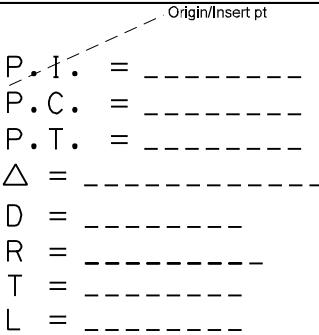
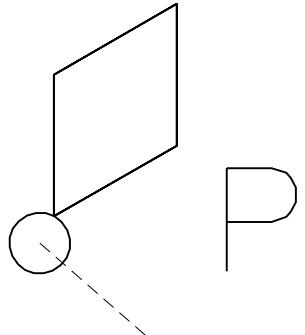
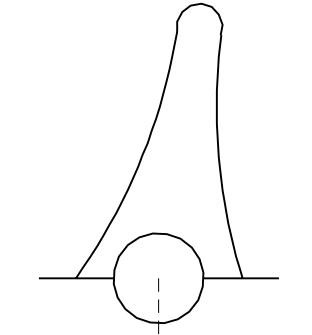
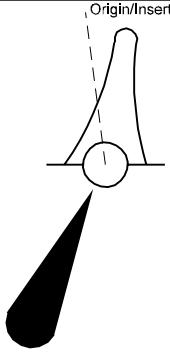
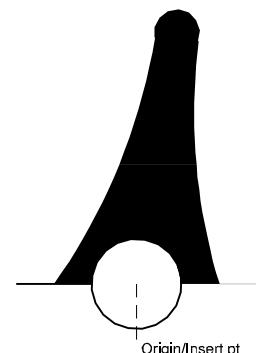
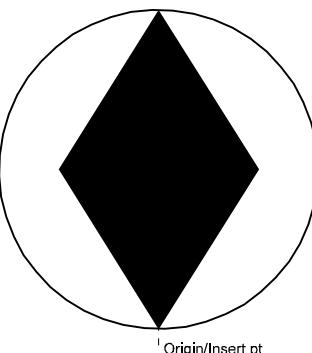
		
Survey/Mapping: LTBEAC LIGHTED BEACON Element type: Symbol	Survey/Mapping: LTYB LIGHTED BUOY Element type: Symbol	Survey/Mapping: LTYBB LIGHTED BARREL BUOY BLACK Element type: Symbol
		
Survey/Mapping: LTFLD FLOODLIGHT Element type: Symbol	Survey/Mapping: LTFLT LIGHT FLOAT Element type: Symbol	Survey/Mapping: LTFLT1 LIGHT FLOAT IALA Element type: Symbol
		
Survey/Mapping: LTFLT2 LIGHT FLOAT IALA Element type: Symbol	Survey/Mapping: LTHOU1 LIGHTHOUSE Element type: Symbol	Survey/Mapping: LTHOU2 LIGHTHOUSE Element type: Symbol

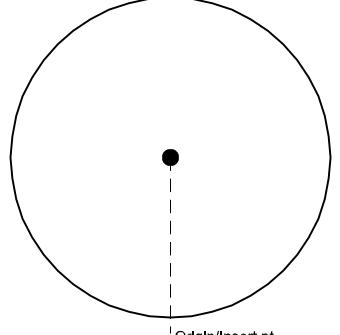
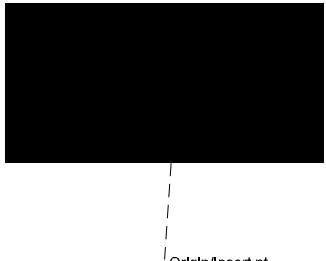
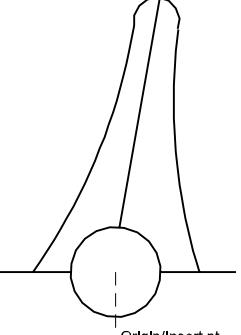
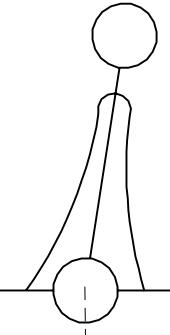
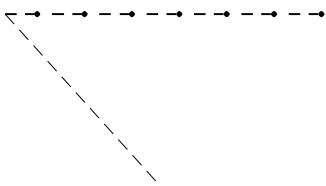
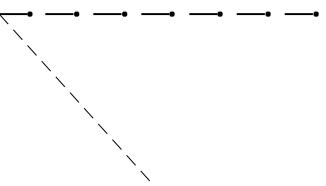
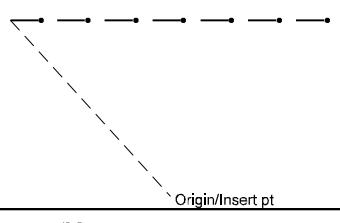
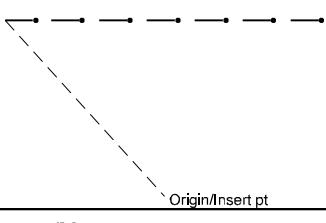
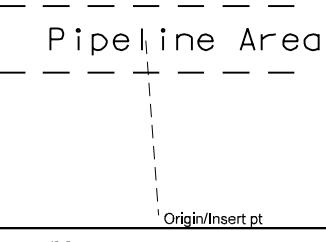
Survey/Mapping: LTMAJ1 MAJOR FLOATING LIGHT Element type: Symbol	Survey/Mapping: LTMAJ2 MAJOR FLOATING LIGHT Element type: Symbol	Survey/Mapping: LTMARK LIGHTED MARKER Element type: Symbol
Survey/Mapping: LTMIN2 MINOR FLOATING LIGHT Element type: Symbol	Survey/Mapping: LTPLT1 LIGHTED PLATFORM Element type: Symbol	Survey/Mapping: LTPLT2 LIGHTED PLATFORM Element type: Symbol
Survey/Mapping: LTPLX LIGHT POLE_EXISTING Element type: Symbol	Survey/Mapping: LTSHP1 LIGHTED VESSEL_LIGHTSHIP Element type: Symbol	Survey/Mapping: LTSHP2 LIGHTED VESSEL_LIGHTSHIP Element type: Symbol

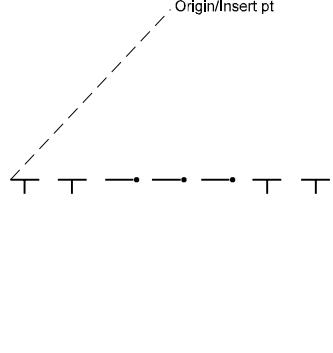
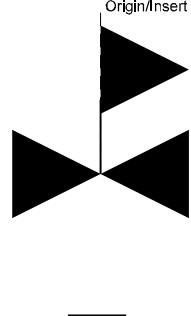
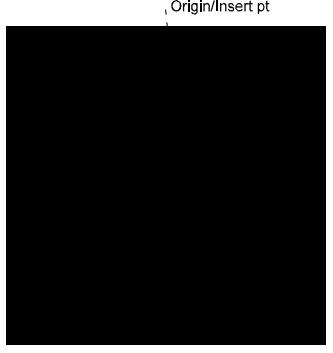
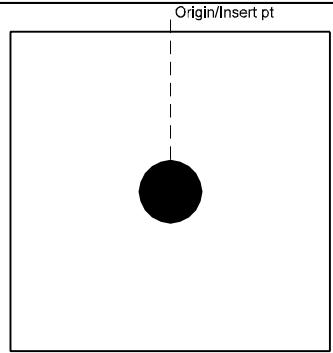
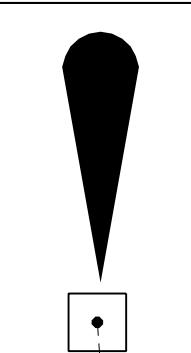
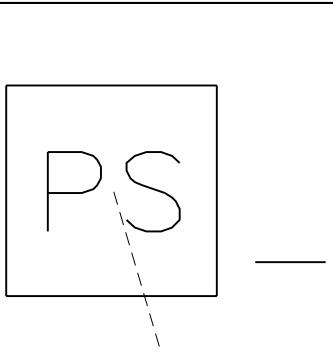
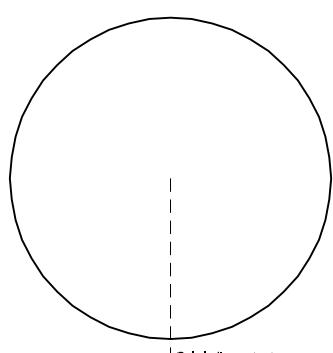
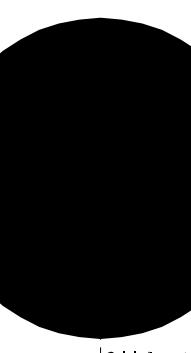
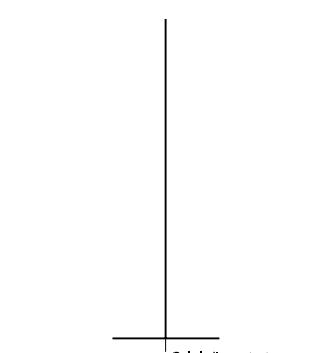
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: LTSHP3 LIGHTED VESSEL LIGHTSHIP Element type: Symbol	Survey/Mapping: LTSTRX STREET LITE BRACKET_EXIST Element type: Symbol	Survey/Mapping: LTOW2 LIGHTED BEACON TOWER Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: LTVES2 UNMANNED LIGHT VESSEL Element type: Symbol	Survey/Mapping: MARINA BOAT HARBOR MARINA Element type: Symbol	Survey/Mapping: MARKGD GREEN DAY MARKER Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: MARKRD RED DAY MARKER Element type: Symbol	Survey/Mapping: MEAST LIGHTED EAST MARKER BUOY Element type: Symbol	Survey/Mapping: MNORTH NORTH ARROW Element type: Symbol

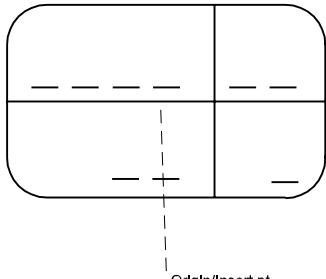
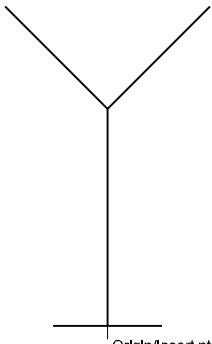
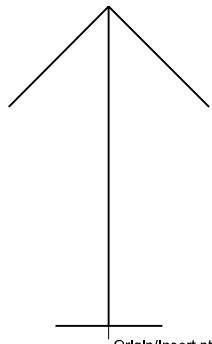
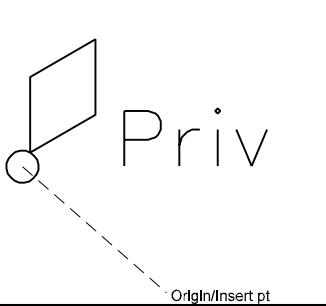
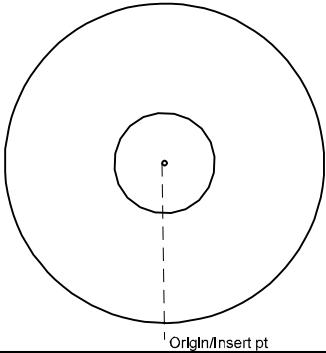
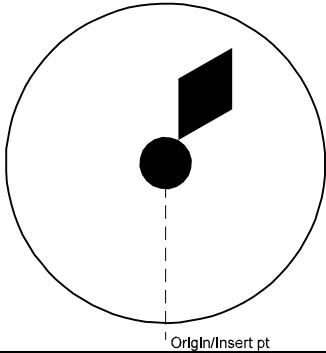
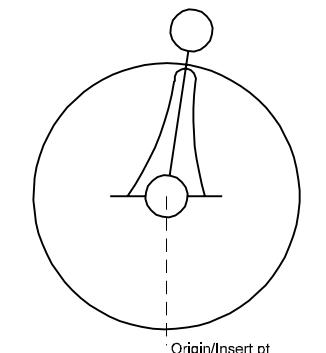
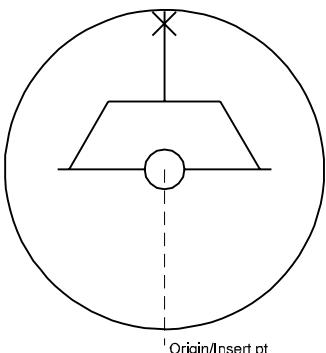
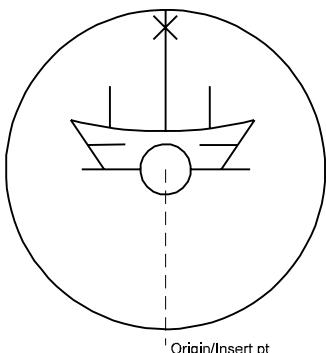
 Survey/Mapping: MONWEL MONITORING WELL Element type: Symbol	 Survey/Mapping: MORBB MOORING BUOY Element type: Symbol	 Survey/Mapping: MORBBB MOORING BARREL BUOY BLACK Element type: Symbol
 Survey/Mapping: MORBBW MOORING BARREL BUOY WHITE Element type: Symbol	 Survey/Mapping: MORBCW MOORING CAN BUOY WHITE Element type: Symbol	 Survey/Mapping: MORTWR MOORING TOWER Element type: Symbol
 Survey/Mapping: MOTRHP MOTOR HP Element type: Symbol	 Survey/Mapping: MSOUTH LIGHTED SOUTH MARKER BUOY Element type: Symbol	 Survey/Mapping: MWEST LIGHTED WEST MARKER BUOY Element type: Symbol

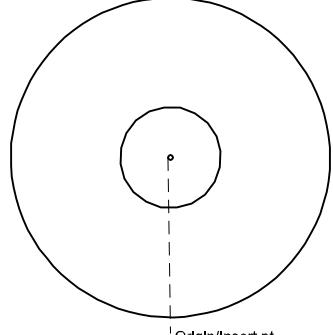
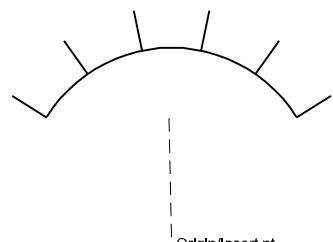
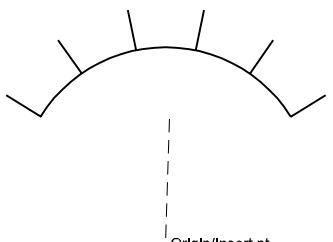
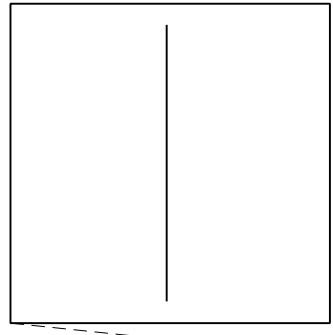
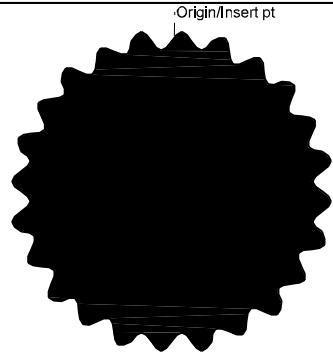
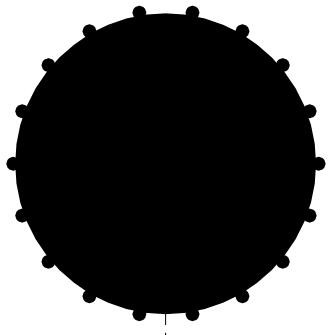
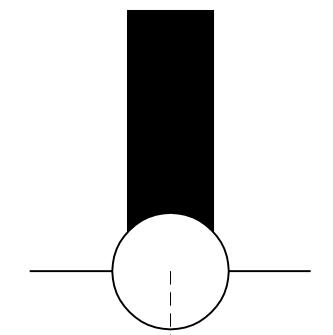
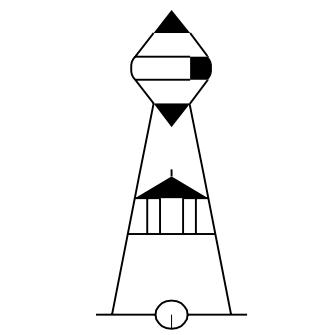
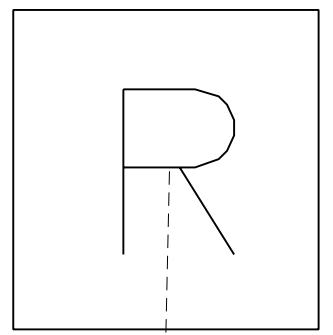
		
Survey/Mapping: NOTICE NOTICE BOARD Element type: Symbol	Survey/Mapping: NUN1 NUN BUOY Element type: Symbol	Survey/Mapping: NUN2 NUNBUOY Element type: Symbol
		
Survey/Mapping: NUNBT BLACK NUN BUOY W TOPMARK Element type: Symbol	Survey/Mapping: NUNWT WHITE NUN BUOY W TOPMARK Element type: Symbol	Survey/Mapping: OBS OBSTRUCTION Element type: Symbol
		
Survey/Mapping: OBSSPT OBSERVATION SPOT Element type: Symbol	Survey/Mapping: OBSTRL OBSTRUCTION LIGHT Element type: Symbol	Survey/Mapping: ODAS ODAS BUOY DATA COLLECT Element type: Symbol

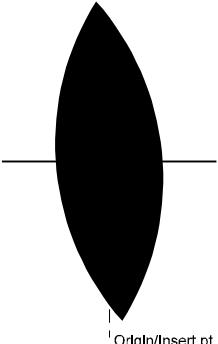
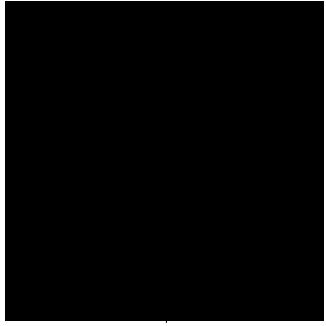
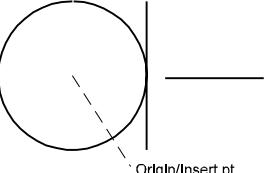
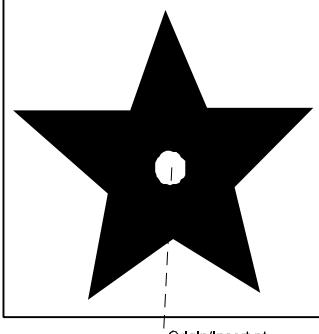
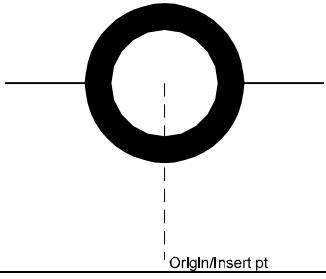
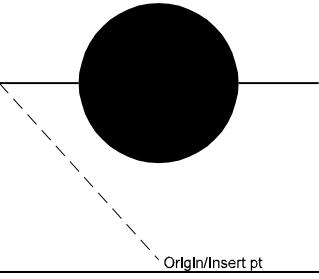
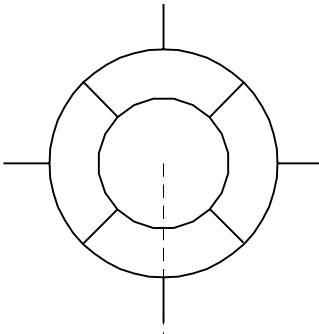
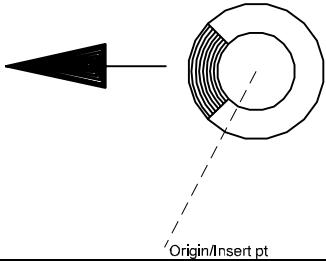
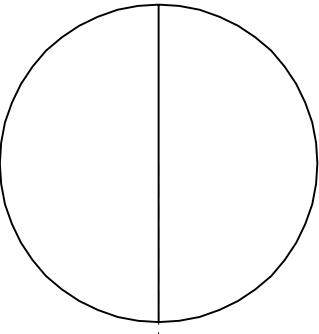
		
<p>Survey/Mapping: OUTB BUOY MARKING OUTFALL Element type: Symbol</p>	<p>Survey/Mapping: PAPI PAPI LIGHT UNIT Element type: Symbol</p>	<p>Survey/Mapping: PHOCPT PHOTO CONTROL POINT Element type: Symbol</p>
 <ul style="list-style-type: none"> P . I . = ----- P . C . = ----- P . T . = ----- △ = ----- D = ----- R = ----- T = ----- L = ----- 		
<p>Survey/Mapping: PIINFO PI INFORMATION Element type: Symbol</p>	<p>Survey/Mapping: PIL1 PILLAR BUOY Element type: Symbol</p>	<p>Survey/Mapping: PIL2 PILLAR BUOY Element type: Symbol</p>
		
<p>Survey/Mapping: PILLT LIGHTED PILLAR BUOY Element type: Symbol</p>	<p>Survey/Mapping: PILM MULT COLOR PILLAR BUOY Element type: Symbol</p>	<p>Survey/Mapping: PILOT BOARDING PLACE Element type: Symbol</p>

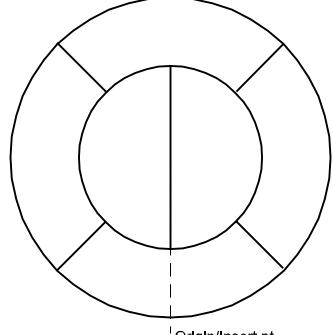
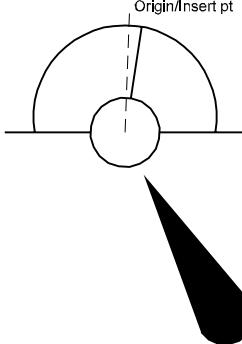
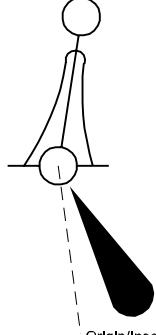
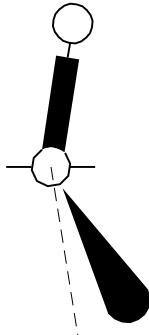
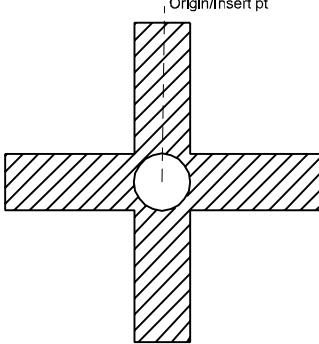
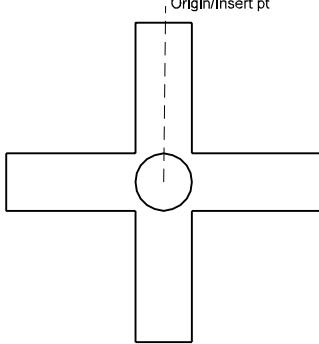
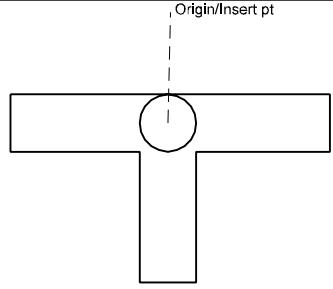
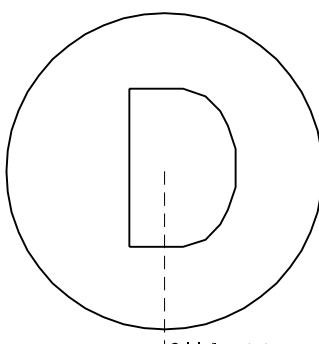
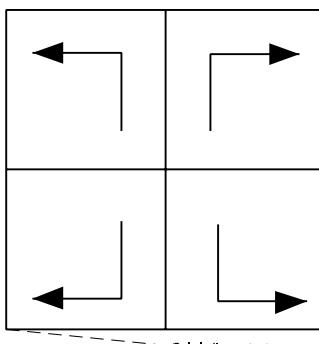
		
Survey/Mapping: PILOT1 PILOT OFFICE Element type: Symbol	Survey/Mapping: PILOT2 PILOT OFFICE Element type: Symbol	Survey/Mapping: PILV VERT STRIPE PILLAR BUOY Element type: Symbol
		
Survey/Mapping: PILVT V STRP PILLAR BUOY W TOPMK Element type: Symbol	Survey/Mapping: PIPDIS DISUSED PIPELINE PIPE Element type: Symbol	Survey/Mapping: PIPE WATER SEWER OUTFALL INTAKE Element type: Symbol
		
Survey/Mapping: PIPE1 OIL GAS PIPELINE Element type: Symbol	Survey/Mapping: PIPE2 OIL GAS PIPELINE Element type: Symbol	Survey/Mapping: PIPES1 OIL GAS PIPELINE AREA Element type: Symbol

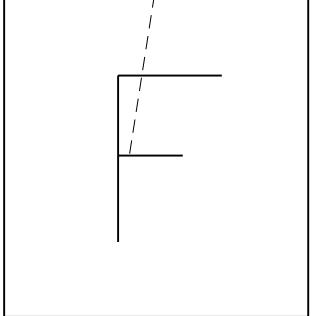
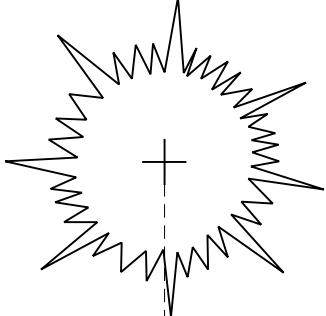
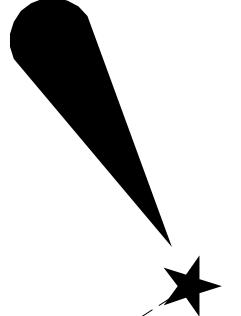
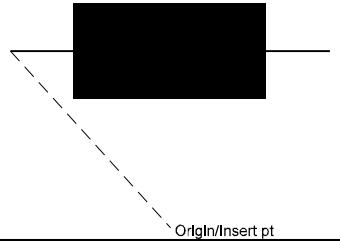
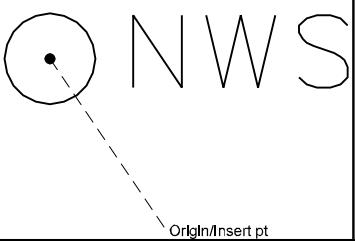
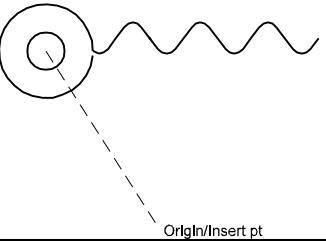
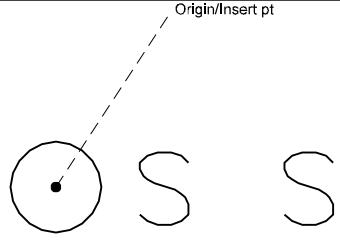
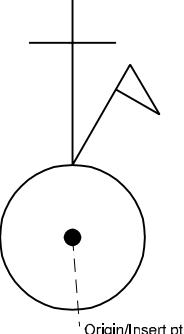
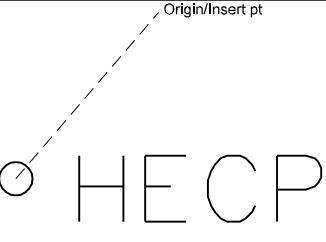
		
Survey/Mapping: PIPES2 OIL GAS PIPELINE AREA Element type: Symbol	Survey/Mapping: PIVALV POST INDICATOR VALVE Element type: Symbol	Survey/Mapping: PLAT1 PROD PLATFORM OIL DERRICK Element type: Symbol
		
Survey/Mapping: PLAT2 PROD PLATFORM OIL DERRICK Element type: Symbol	Survey/Mapping: PLAT3 PROD PLATFORM OIL DERRICK Element type: Symbol	Survey/Mapping: PMPSTA PUMP STATION Element type: Symbol
		
Survey/Mapping: POLE1 POLE STAKE PERCH Element type: Symbol	Survey/Mapping: POLE2 POLE STAKE PERCH Element type: Symbol	Survey/Mapping: POLE3 POLE STAKE PERCH Element type: Symbol

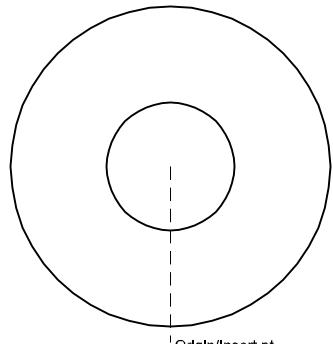
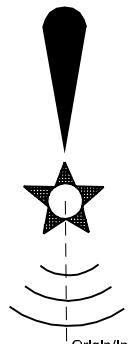
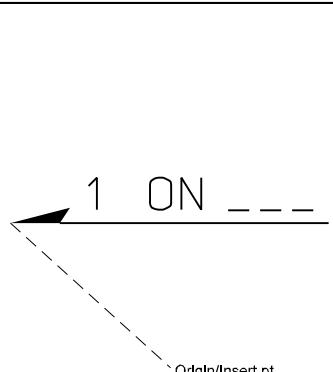
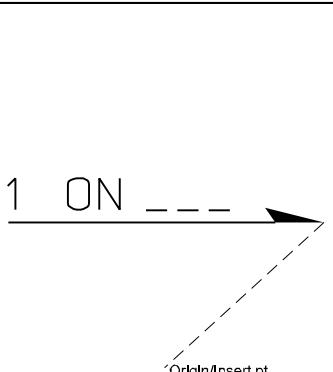
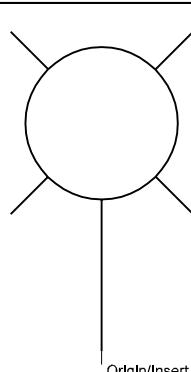
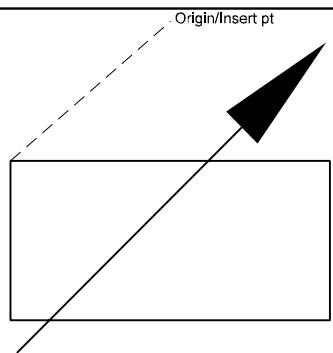
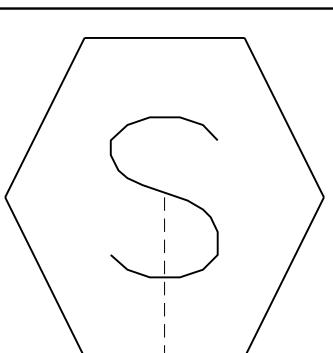
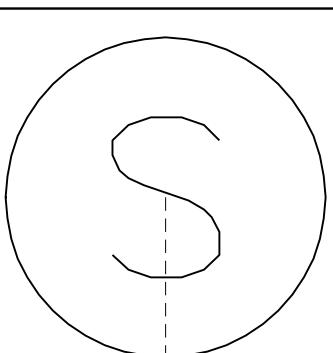
		
Survey/Mapping: POLEID POLE IDENT. SYMBOL Element type: Symbol	Survey/Mapping: POLEP PORT HAND STAKE POLE Element type: Symbol	Survey/Mapping: POLES STARBOARD HAND POLE STAKE Element type: Symbol
		
Survey/Mapping: PRIVB PRIVATE BARREL BUOY Element type: Symbol	Survey/Mapping: RADAR RADAR STATION OR BEACON Element type: Symbol	Survey/Mapping: RADAR1 FLOATING RADAR BEACON Element type: Symbol
		
Survey/Mapping: RADAR2 FLOATING RADAR BEACON Element type: Symbol	Survey/Mapping: RADAR3 FLOATING RADAR BEACON Element type: Symbol	Survey/Mapping: RADAR4 FLOATING RADAR BEACON Element type: Symbol

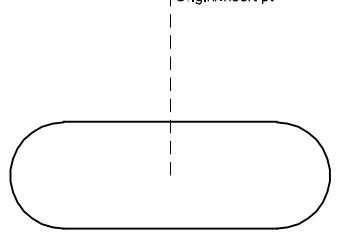
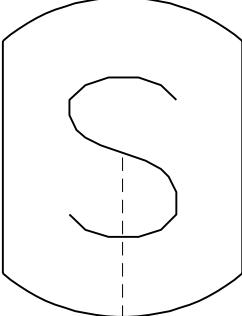
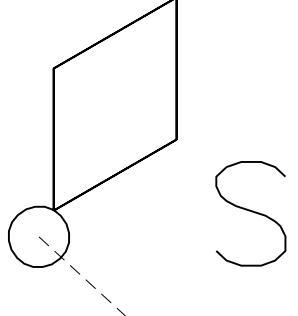
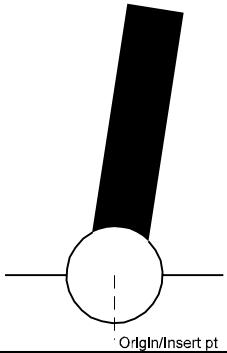
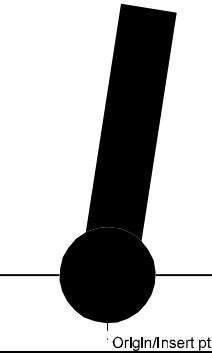
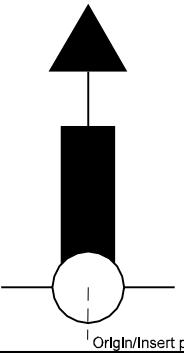
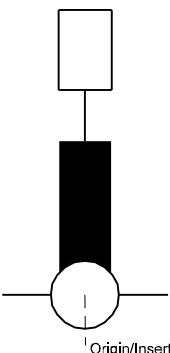
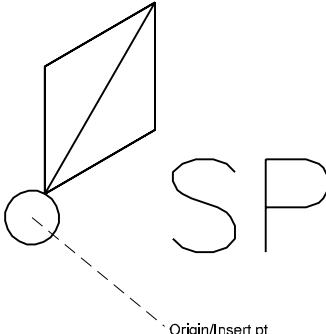
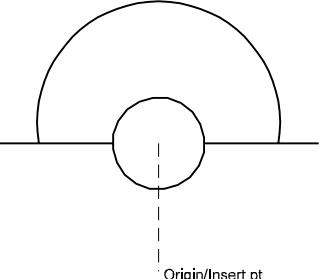
		
Survey/Mapping: RADIO RADIO BEACON GENERAL Element type: Symbol	Survey/Mapping: RADRF1 RADAR REFLECTOR OR FEATURE Element type: Symbol	Survey/Mapping: RADRF2 RADAR REFLECTOR OR FEATURE Element type: Symbol
		
Survey/Mapping: RANGEX RANGE EXTENSION Element type: Symbol	Survey/Mapping: REEF CORAL REEF LARGE ICON Element type: Symbol	Survey/Mapping: REEF1 CORAL REEF SMALL ICON Element type: Symbol
		
Survey/Mapping: REFUG1 REFUGE BEACON Element type: Symbol	Survey/Mapping: REFUG2 REFUGE BEACON Element type: Symbol	Survey/Mapping: REIL REIL LIGHT UNIT Element type: Symbol

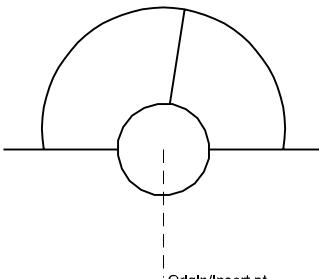
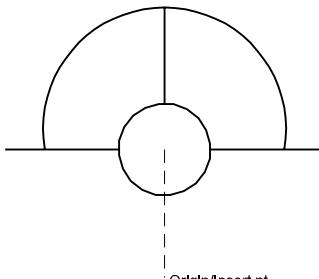
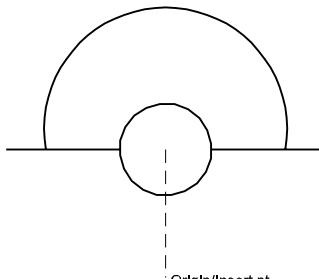
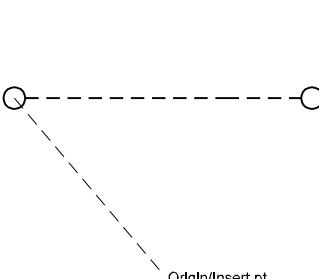
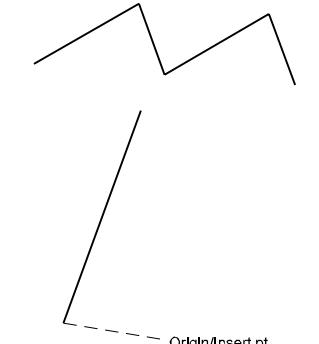
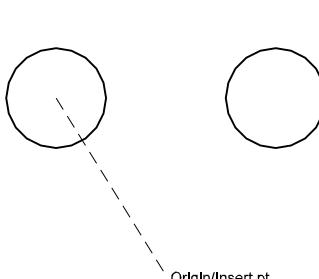
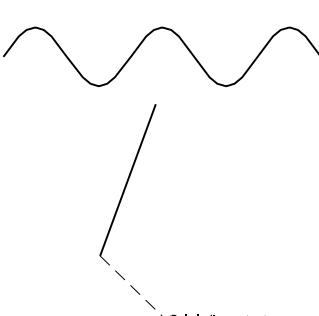
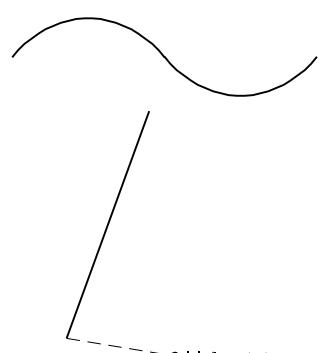
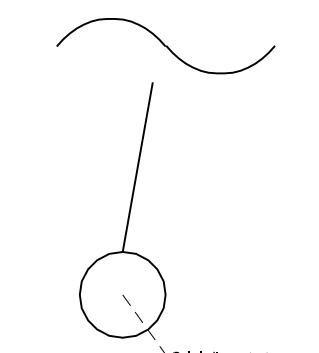
 Survey/Mapping: RESCUE RESCUE STATION Element type: Symbol	 Survey/Mapping: RESPLT OBS RESEARCH PLATFORM Element type: Symbol	 Survey/Mapping: RGVALV REGULATOR VALVE Element type: Symbol
 Survey/Mapping: RSTAR RANGE STAR Element type: Symbol	 Survey/Mapping: RVMMOP OPEN RIVER MILE MARKER Element type: Symbol	 Survey/Mapping: RVMMSO SOLID RIVER MILE MARKER Element type: Symbol
 Survey/Mapping: RWCLL RW CENTERLINE LIGHT Element type: Symbol	 Survey/Mapping: RWEL RW END LIGHT Element type: Symbol	 Survey/Mapping: RWLEL RW EDGE LIGHT_ELEVATED Element type: Symbol

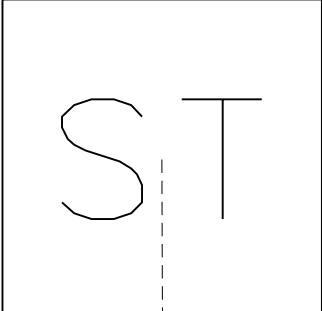
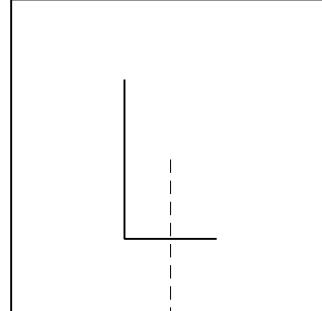
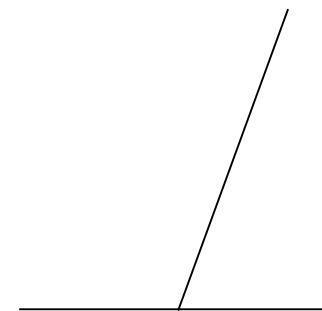
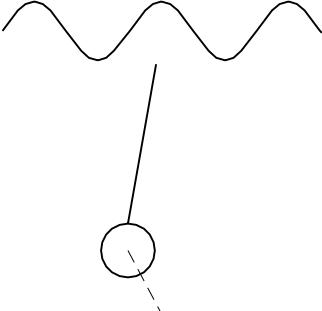
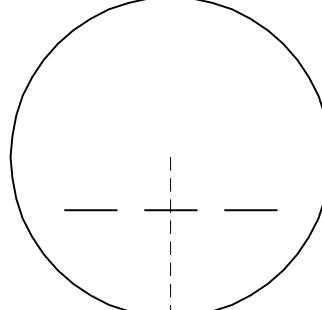
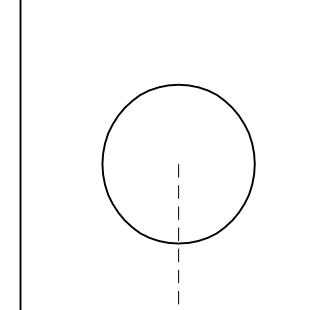
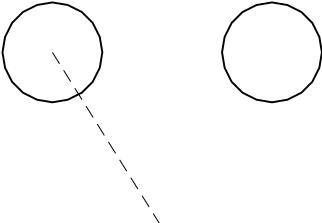
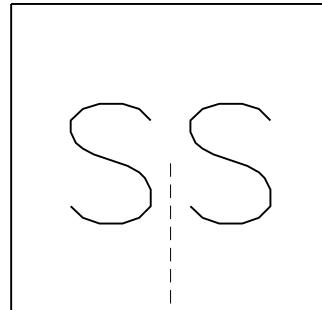
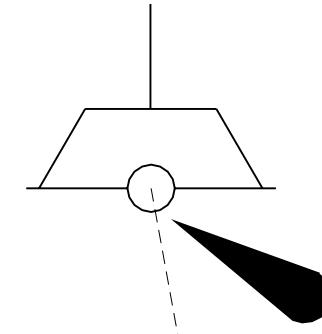
		
Survey/Mapping: RWLSF RW EDGE LIGHT SEMIFLUSH Element type: Symbol	Survey/Mapping: SAFE1 LIGHTED SAFE WATER MARK Element type: Symbol	Survey/Mapping: SAFE2 LIGHTED SAFE WATER MARK Element type: Symbol
		
Survey/Mapping: SAFE3 LIGHTED SAFE WATER MARK Element type: Symbol	Survey/Mapping: SCNRH SECTION CORNER HATCHED Element type: Symbol	Survey/Mapping: SCNRO SECTION CORNER OPEN Element type: Symbol
		
Survey/Mapping: SCNRTO SECTION CORNER T OPEN Element type: Symbol	Survey/Mapping: SDMHOL STORM DRAINAGE MANHOLE Element type: Symbol	Survey/Mapping: SECCUT TYPICAL SECTION CUT Element type: Symbol

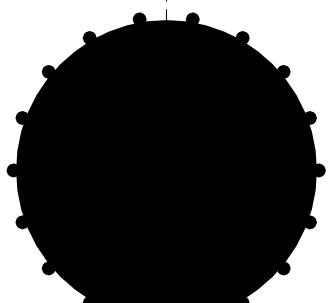
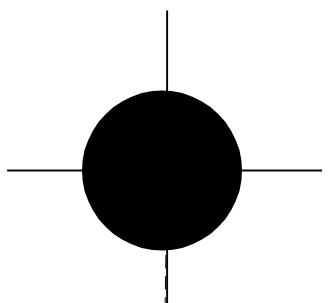
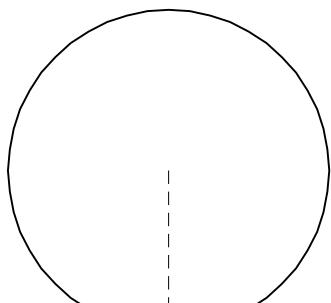
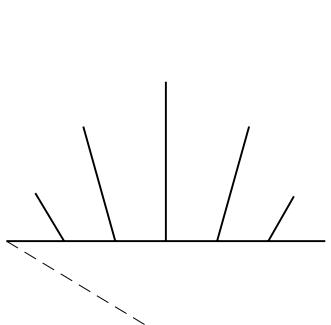
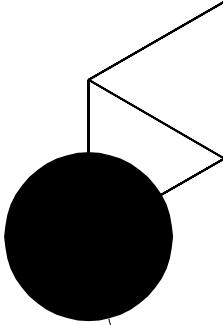
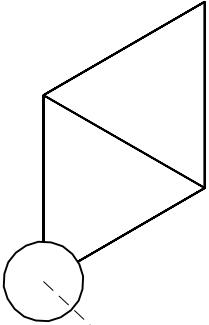
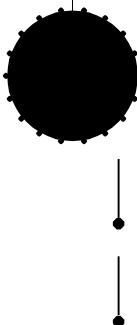
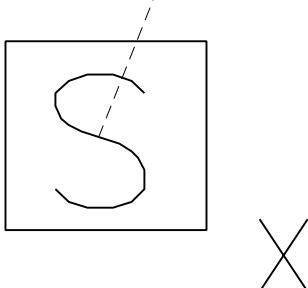
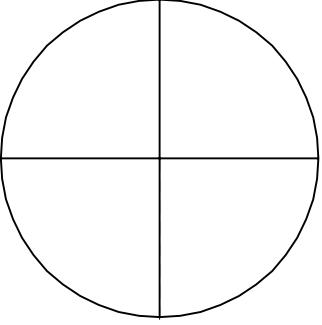
		
Survey/Mapping: SFL SEQUENCED FLASHER LIGHT Element type: Symbol	Survey/Mapping: SHRUB CONIFEROUS SHRUB Element type: Symbol	Survey/Mapping: SIGBRG BRIDGE LIGHT INC TRAFFIC Element type: Symbol
		
Survey/Mapping: SIGN SIGN Element type: Symbol	Survey/Mapping: SIGNWS NAT WEATHER SVC STATION Element type: Symbol	Survey/Mapping: SIGSHO SUB SIGNAL CONNECT SHORE Element type: Symbol
		
Survey/Mapping: SIGST1 SIGNAL STATION GENERAL Element type: Symbol	Survey/Mapping: SIGST2 SIGNAL STATION GENERAL Element type: Symbol	Survey/Mapping: SIGSTP PORT CONTROL SIGNAL STATION Element type: Symbol

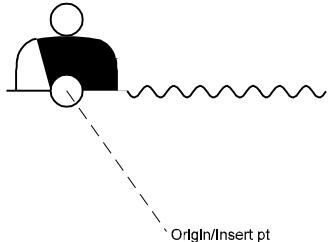
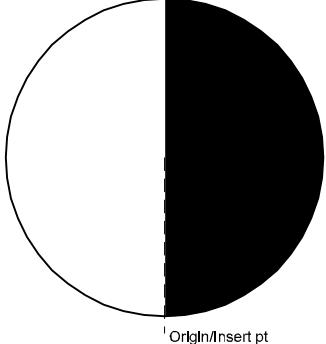
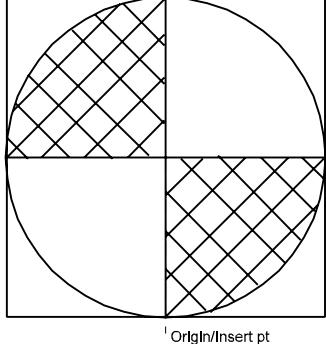
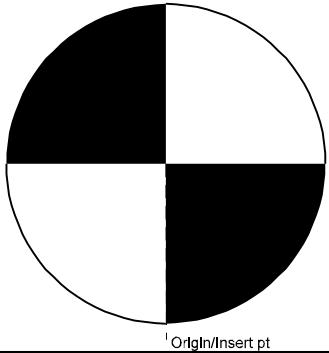
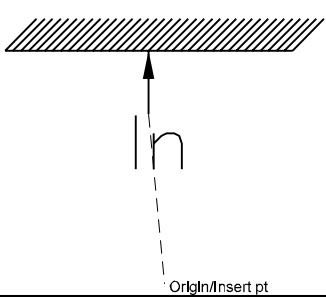
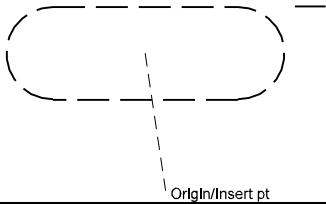
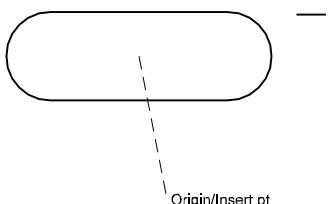
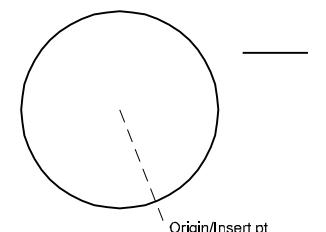
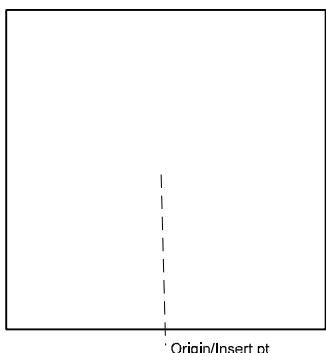
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: SIGSUB SUBMARINE SIGNAL Element type: Symbol	Survey/Mapping: SIRLH1 SIREN AT LIGHTHOUSE Element type: Symbol	Survey/Mapping: SIRLH2 SIREN AT LIGHTHOUSE Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: SLARRL SLOPE AR W ENTER DATA FIELD Element type: Symbol	Survey/Mapping: SLARRR SLOPE AR W ENTER DATA FIELD Element type: Symbol	Survey/Mapping: SLLX STREETLITE LUMINAIRE_EXIST Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Survey/Mapping: SLREG CONSTNT CURRENT TRANSFORMER Element type: Symbol	Survey/Mapping: SNMETR SANITARY METER Element type: Symbol	Survey/Mapping: SNMHOL SANITARY MANHOLE Element type: Symbol

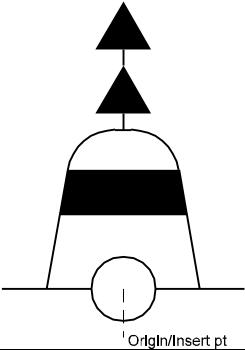
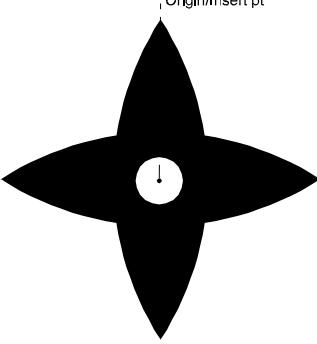
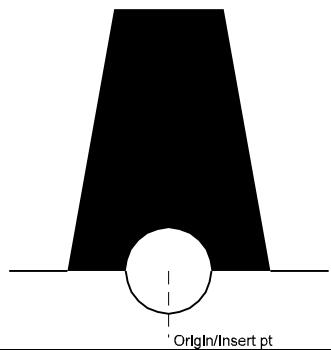
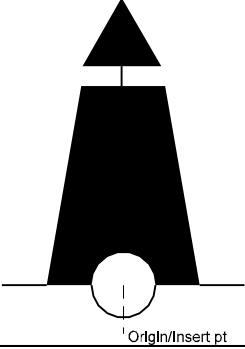
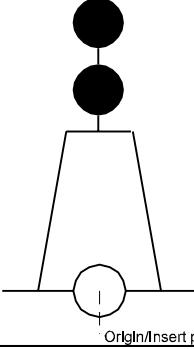
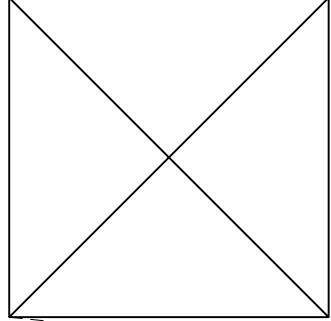
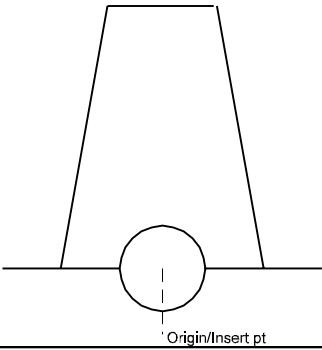
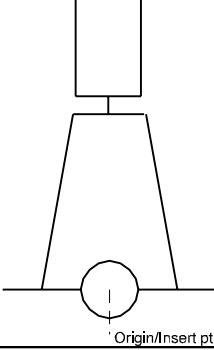
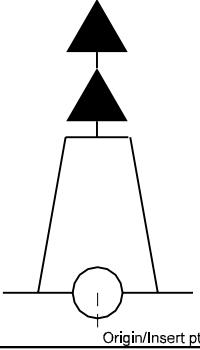
		
Survey/Mapping: SNPVSL SANITARY PRESSURE VESSEL Element type: Symbol	Survey/Mapping: SNVALT SANITARY VALVE VAULT Element type: Symbol	Survey/Mapping: SPAR1 SPAR BUOY SPINDLE BUOY Element type: Symbol
		
Survey/Mapping: SPAR2 SPAR BUOY SPINDLE BUOY Element type: Symbol	Survey/Mapping: SPARB BLACK SPARBUOY Element type: Symbol	Survey/Mapping: SPARBT BLACK SPAR BUOY W TOPMARK Element type: Symbol
		
Survey/Mapping: SPARWT WHITE SPAR BUOY W TOP Element type: Symbol	Survey/Mapping: SPH1 SPHERICAL BUOY Element type: Symbol	Survey/Mapping: SPH2 SPHERICAL BUOY Element type: Symbol

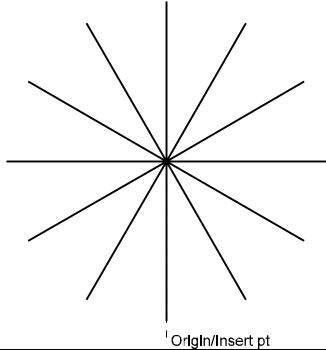
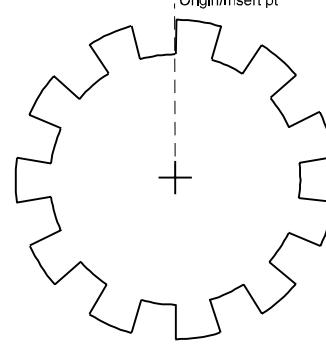
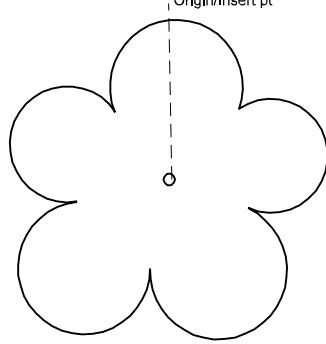
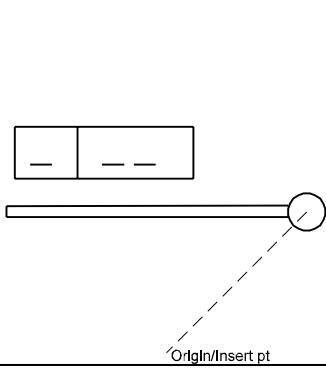
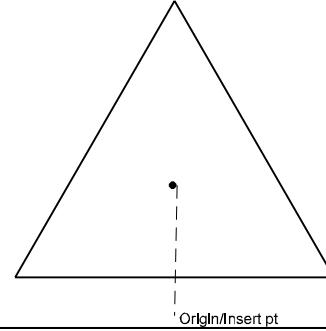
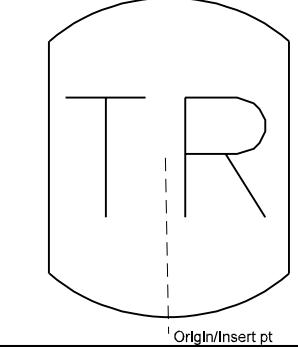
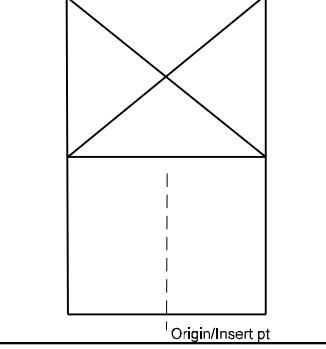
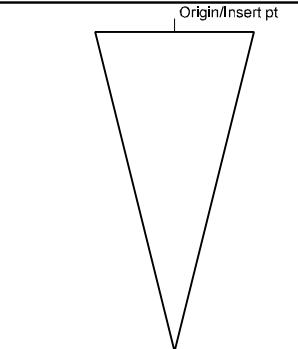
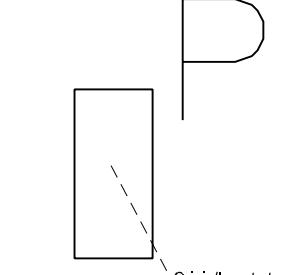
		
Survey/Mapping: SPHD DIAG STRIPE SPHER BUOY Element type: Symbol	Survey/Mapping: SPHV VERT STRIPE SPHER BUOY Element type: Symbol	Survey/Mapping: SPHW WHITE SHERICAL BUOY Element type: Symbol
		
Survey/Mapping: SPILE SUBMERGED PILING Element type: Symbol	Survey/Mapping: SPILE1 SUBMERGED PILES Element type: Symbol	Survey/Mapping: SPILES SUBMERGED PILES Element type: Symbol
		
Survey/Mapping: SPILEX SUBMERGED PILE W POSITION Element type: Symbol	Survey/Mapping: SPOST SUBMERGED POST Element type: Symbol	Survey/Mapping: SPOSTX SUBMERGED POST W POSITION Element type: Symbol

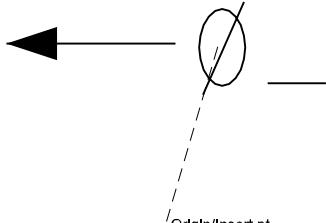
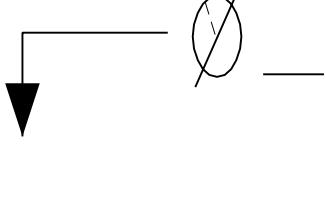
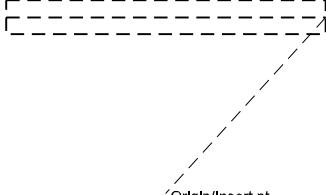
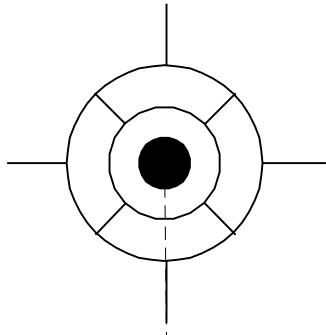
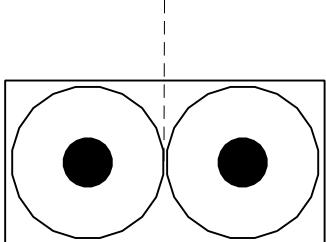
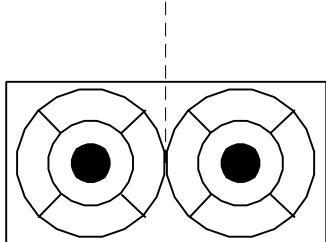
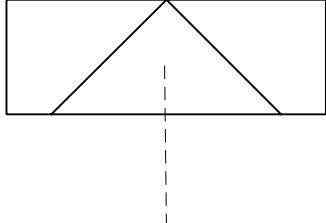
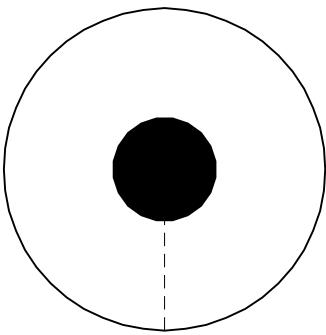
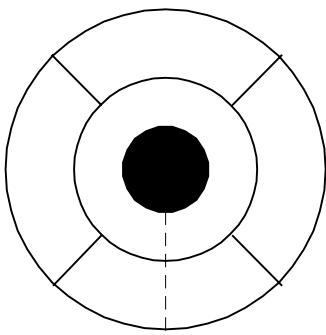
 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
<p>Survey/Mapping: SPTANK SEPTIC TANK Element type: Symbol</p>	<p>Survey/Mapping: SSLSTA SANITARY SEWER LIFT STATION Element type: Symbol</p>	<p>Survey/Mapping: STAKE STAKE PERCH Element type: Symbol</p>
<p>Survey/Mapping: STAKE WITH POSITION Element type: Symbol</p>	<p>Survey/Mapping: STHWY STATE HIGHWAY SYMBOL Element type: Symbol</p>	<p>Survey/Mapping: STMPIT STEAM PIT Element type: Symbol</p>
<p>Survey/Mapping: STUMPS SUBMERGED STUMPS Element type: Symbol</p>	<p>Survey/Mapping: SUBSTA SUBSTATION Element type: Symbol</p>	<p>Survey/Mapping: SUPER SUPER BUOY Element type: Symbol</p>

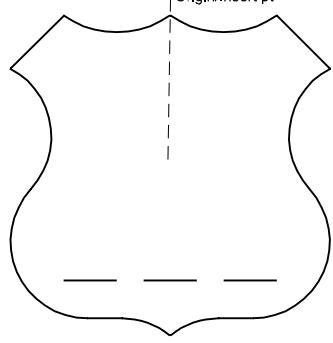
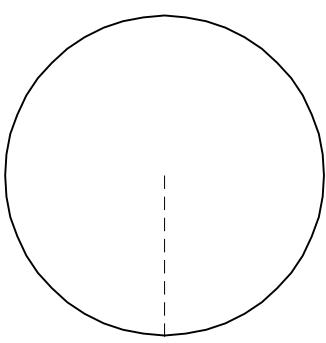
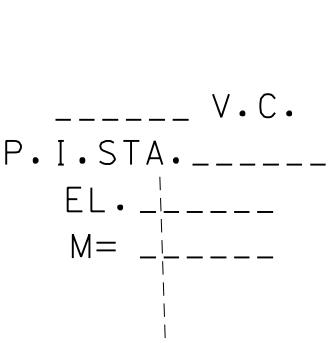
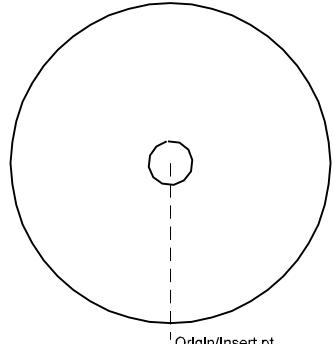
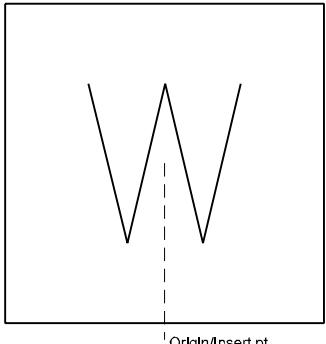
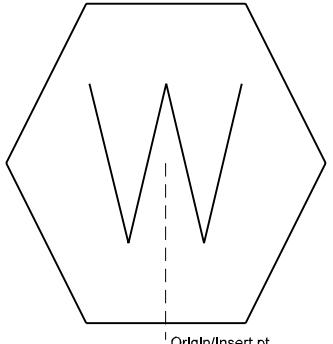
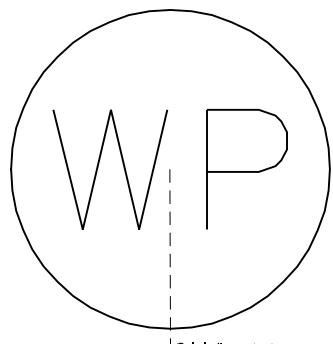
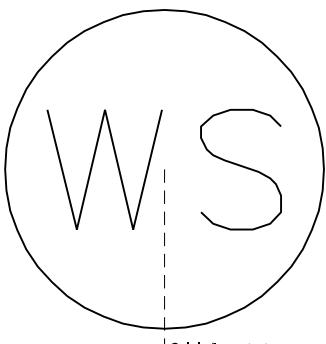
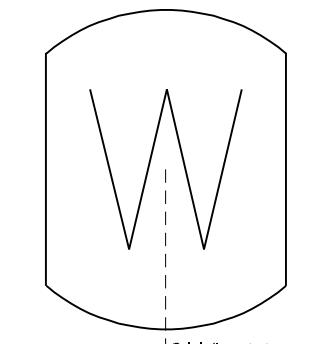
		
Survey/Mapping: SUWEL2 SUSPENDED WELL DEPTH UNKWN Element type: Symbol	Survey/Mapping: SUWEL3 SUSPENDED WELL DEPTH UNKWN Element type: Symbol	Survey/Mapping: SUWELY SUSPENDED WELL KNOWN DEPTH Element type: Symbol
		
Survey/Mapping: SWAMP SWAMP Element type: Symbol	Survey/Mapping: SWELB1 SUBMERGED WELL W BUOY Element type: Symbol	Survey/Mapping: SWELB2 SUBMERGED WELL W BUOY Element type: Symbol
		
Survey/Mapping: SWELL5 SUBMERGED PROD WELL Element type: Symbol	Survey/Mapping: SWPADX SWITCH_PAD_EXIST Element type: Symbol	Survey/Mapping: TDZL TOUCHDOWN ZONE LIGHT Element type: Symbol

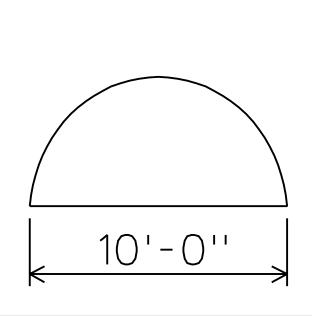
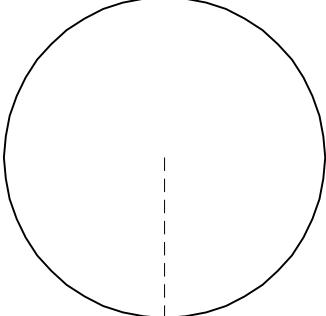
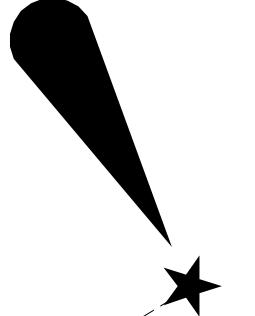
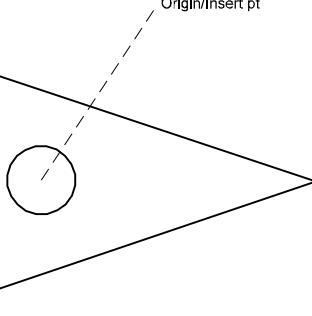
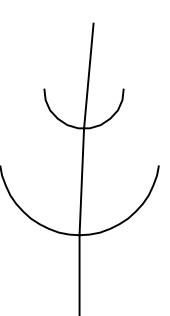
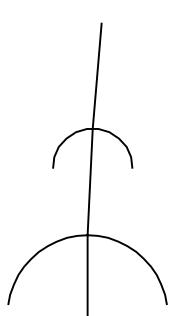
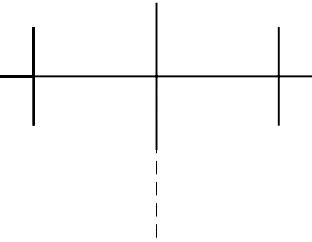
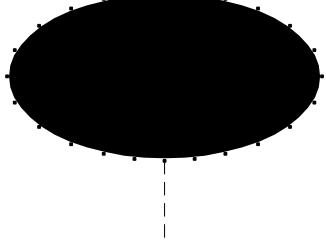
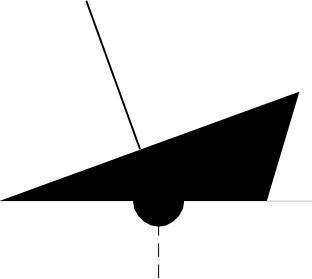
		
Survey/Mapping: TELBBB TELEGRAPHIC BARREL BUOY BLK Element type: Symbol	Survey/Mapping: THL THRESHOLD LIGHT Element type: Symbol	Survey/Mapping: TIDEG TIDE GAGE Element type: Symbol
		
Survey/Mapping: TIDSTF TIDESTAFF Element type: Symbol	Survey/Mapping: TIRETR TIRE TREDDLE Element type: Symbol	Survey/Mapping: TNKBG TANK BELOW GROUND Element type: Symbol
		
Survey/Mapping: TNKHAG TANK HORIZ ABOVE GROUND Element type: Symbol	Survey/Mapping: TNKVAG TANK VERTICAL ABOVE GROUND Element type: Symbol	Survey/Mapping: TOW1 BEACON TOWER Element type: Symbol

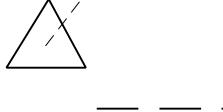
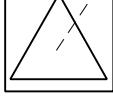
		
Survey/Mapping: TOW2 BEACON TOWER Element type: Symbol	Survey/Mapping: TOW3 BEACON TOWER Element type: Symbol	Survey/Mapping: TOWB BLACK BEACON TOWER Element type: Symbol
		
Survey/Mapping: TOWBT1 BLACK BEACON TOWER W TOP Element type: Symbol	Survey/Mapping: TOWBT2 BLACK BEACON TOWER W TOP Element type: Symbol	Survey/Mapping: TOWER TRANSMISSION TOWER Element type: Symbol
		
Survey/Mapping: TOWW WHITE BEACON TOWER Element type: Symbol	Survey/Mapping: TOWWT1 WHITE BEACON TOWER W TOP Element type: Symbol	Survey/Mapping: TOWWT2 WHITE BEACON TOWER W T Element type: Symbol

		
Survey/Mapping: TREEC CONIFEROUS TREE Element type: Symbol	Survey/Mapping: TREED DECIDUOUS TREE Element type: Symbol	Survey/Mapping: TREEG GENERIC TREE Element type: Symbol
		
Survey/Mapping: TRFSIG TRAFFIC SIGNAL MAST ARM Element type: Symbol	Survey/Mapping: TRIPNT TRIANGULATION POINT Element type: Symbol	Survey/Mapping: TRVALT TRANSFORMER VAULT Element type: Symbol
		
Survey/Mapping: TSCTRL TR SIGNAL CONTROLLER Element type: Symbol	Survey/Mapping: TSHEAD TRAFFIC SIGNAL HEAD Element type: Symbol	Survey/Mapping: TSPBX TR SIGNAL PULLBOX Element type: Symbol

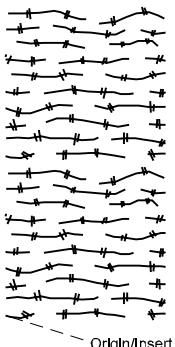
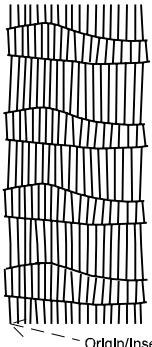
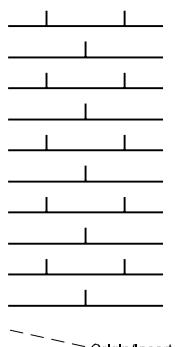
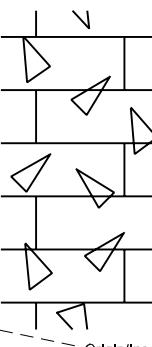
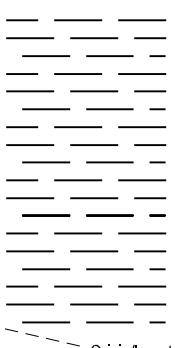
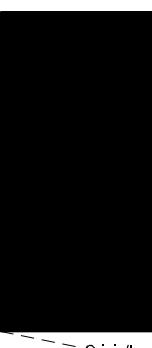
		
Survey/Mapping: TSPHS TR SIGNAL PH NO THRU Element type: Symbol	Survey/Mapping: TSPHT TR SIGNAL PH NO TURN Element type: Symbol	Survey/Mapping: TSVLDT TR SIGNAL VEH LOOP DETECTOR Element type: Symbol
		
Survey/Mapping: TWCLL TW CENTERLINE LIGHT Element type: Symbol	Survey/Mapping: TWEEL TW END LIGHT_ELEVATED Element type: Symbol	Survey/Mapping: TWELSF TW END LIGHT_SEMIFLUSH Element type: Symbol
		
Survey/Mapping: TWGSGN TW GUIDANCE SIGN Element type: Symbol	Survey/Mapping: TWLEL TW EDGE LIGHT_ELEVATED Element type: Symbol	Survey/Mapping: TWLSF TW EDGE LIGHT_SEMIFLUSH Element type: Symbol

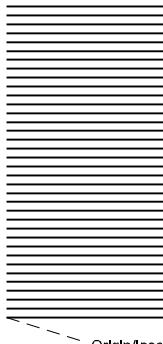
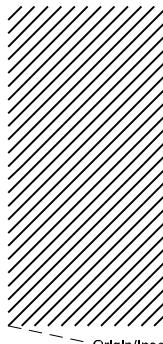
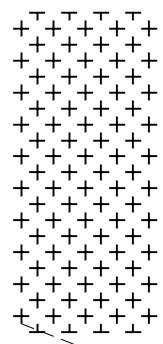
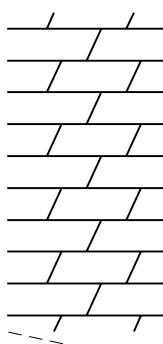
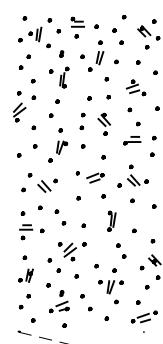
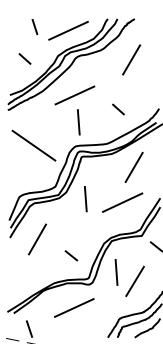
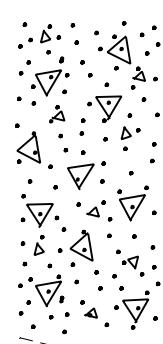
		
Survey/Mapping: USHWY US HIGHWAY SYMBOL Element type: Symbol	Survey/Mapping: UTPLX POLE EXISTING Element type: Symbol	Survey/Mapping: VCDATA VERTICAL CURVE DATA Element type: Symbol
		
Survey/Mapping: VERCPT VERTICAL CONTROL POINT Element type: Symbol	Survey/Mapping: WAHHOL WATER HANHOLE Element type: Symbol	Survey/Mapping: WAMETR WATER METER Element type: Symbol
		
Survey/Mapping: WAPLNT WATER PLANT Element type: Symbol	Survey/Mapping: WASOFT WATER SOFTENER Element type: Symbol	Survey/Mapping: WAVALT WATER VALVE VAULT Element type: Symbol

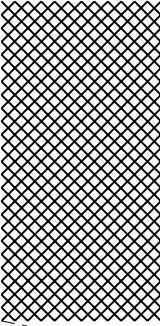
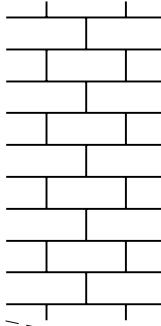
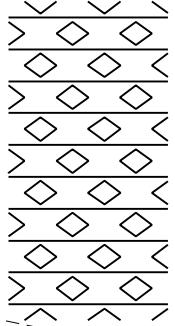
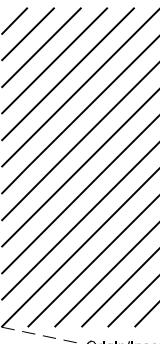
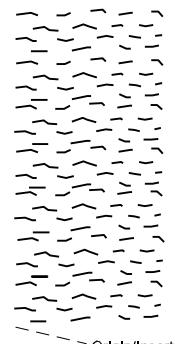
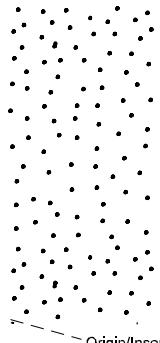
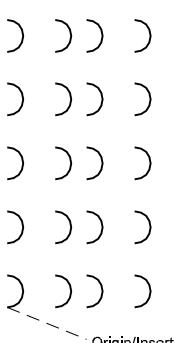
		
Survey/Mapping: WEIR WEIR Element type: Symbol	Survey/Mapping: WELL1 ABOVE WATER WELLHEAD Element type: Symbol	Survey/Mapping: WELL3 ABOVE WATER WELLHEAD Element type: Symbol
		
Survey/Mapping: WINDCN WINDCONE Element type: Symbol	Survey/Mapping: WITHYP PORT HAND WITHY Element type: Symbol	Survey/Mapping: WITHYS STARBOARD HAND WITHY Element type: Symbol
		
Survey/Mapping: WRECK WRECK NOT DANGEROUS Element type: Symbol	Survey/Mapping: WRKDNG DANGER WRECK DEPTH UNKNOWN Element type: Symbol	Survey/Mapping: WRKEXP WRECK PARTLY EXPOSED Element type: Symbol

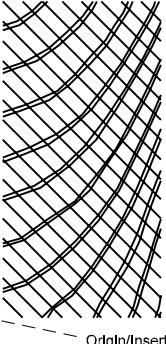
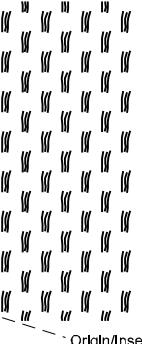
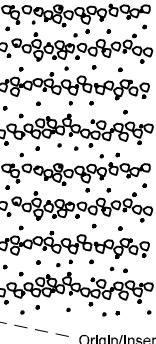
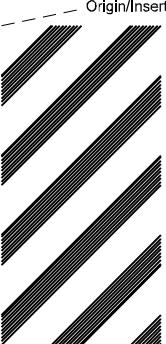
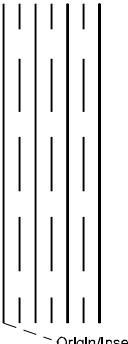
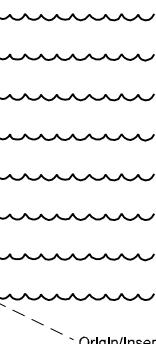
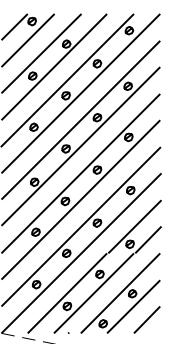
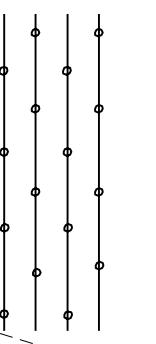
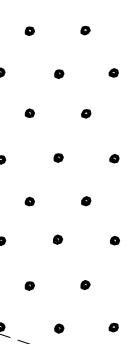
	
Survey/Mapping: XFRPLX XFMR_POLE_EXIST Element type: Symbol	Survey/Mapping: XFRPMX XFMR_PAD_EXIST Element type: Symbol

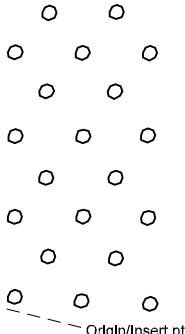
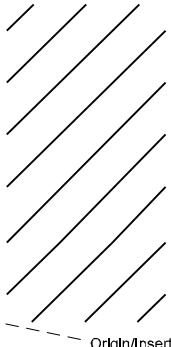
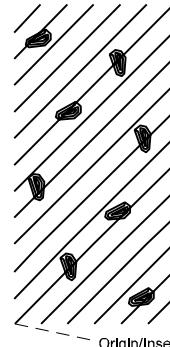
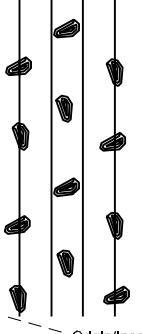
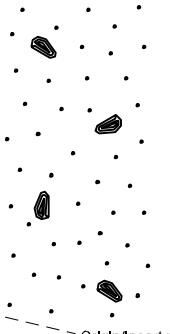
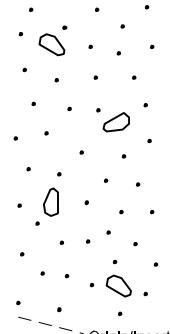
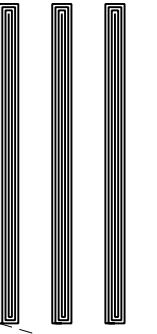
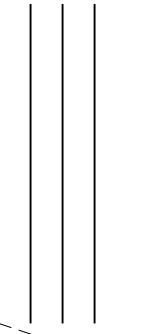
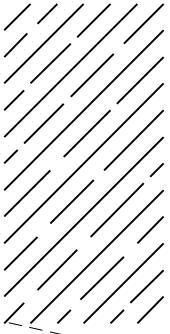
4 Geotechnical Patterns Library

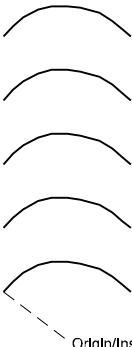
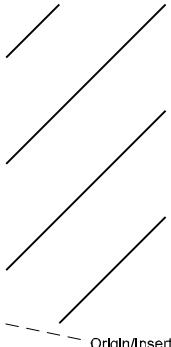
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: AGGLOM AGGLOMERATE FLOW BRECCIA Element type: Pattern	Geotechnical: ANDES ANDESITE Element type: Pattern	Geotechnical: BASALT BASALT Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: BRECCA BRECCIA Element type: Pattern	Geotechnical: CHALK CHALK OR MARL Element type: Pattern	Geotechnical: CHERT CHERT Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: CLAYST CLAYSTONE OR SILTSTONE Element type: Pattern	Geotechnical: CMPSHL COMPACTATION SHALE Element type: Pattern	Geotechnical: COAL COAL Element type: Pattern

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: CONGLM CONGLOMERATE Element type: Pattern	Geotechnical: CSHALE CEMENTED SHALE Element type: Pattern	Geotechnical: CSJNT CLOSELY SPACED JOINTS Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: DIORIT DIORITE Element type: Pattern	Geotechnical: DOLOM DOLOMITE Element type: Pattern	Geotechnical: GABBRO GABBRO Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: GNEISS GNEISS Element type: Pattern	Geotechnical: GRANIT GRANITE Element type: Pattern	Geotechnical: GRAYWC GRAYWACKE Element type: Pattern

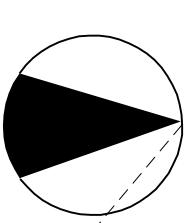
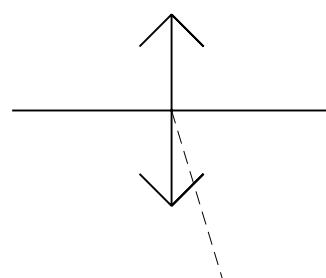
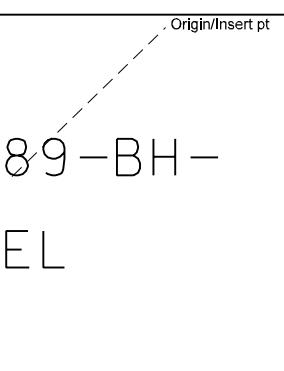
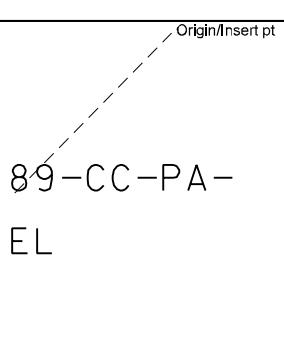
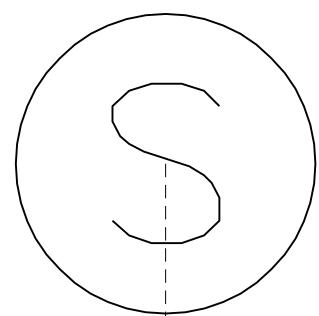
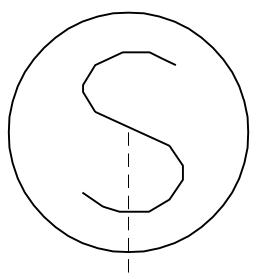
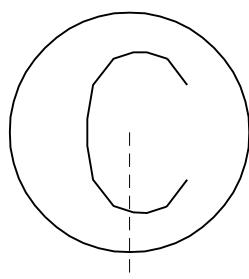
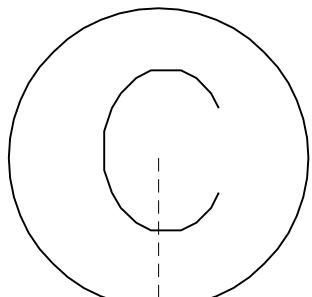
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: HFRACT HIGHLY FRACTURED Element type: Pattern	Geotechnical: LIMEST LIMESTONE Element type: Pattern	Geotechnical: MARBL1 MARBLE ELEVATION VIEW Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: MSJNT MODERATELY SPACED JOINTS Element type: Pattern	Geotechnical: QUARTZ QUARTZITE Element type: Pattern	Geotechnical: RHYOLT RHYOLITE Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Geotechnical: SANDST SANDSTONE Element type: Pattern	Geotechnical: SCHIST SCHIST Element type: Pattern	Geotechnical: SHELL SHELLS Element type: Pattern

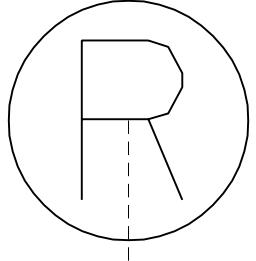
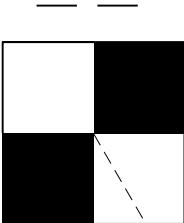
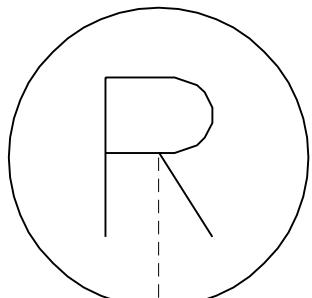
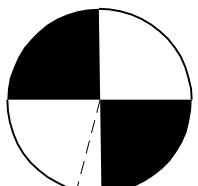
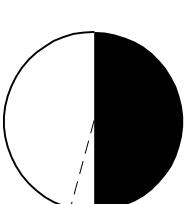
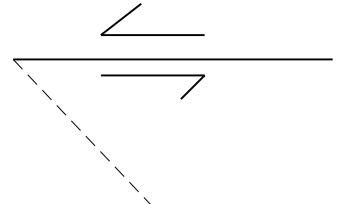
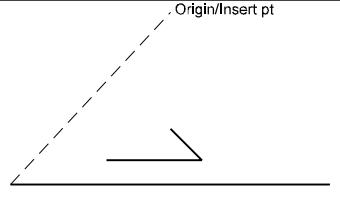
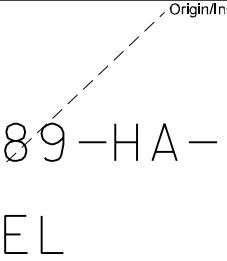
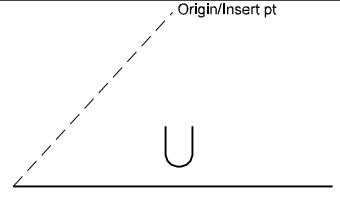
		
Geotechnical: SLATE SLATE Element type: Pattern	Geotechnical: SOAPST SOAPSTONE OR SERPENTINE Element type: Pattern	Geotechnical: TUFF TUFF OR TUFF BRECCIA Element type: Pattern
		
Geotechnical: USCS1 USCS SOIL SYMBOL Element type: Pattern	Geotechnical: USCS10 OL ORGANIC CLAY OR SILT LOW Element type: Pattern	Geotechnical: USCS11 PT PEAT Element type: Pattern
		
Geotechnical: USCS12 SC CLAYEY SAND Element type: Pattern	Geotechnical: USCS13 SM SILTY SAND Element type: Pattern	Geotechnical: USCS14 SP POORLY GRADED SAND Element type: Pattern

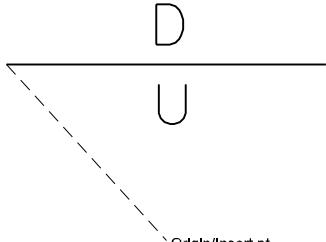
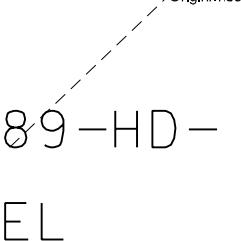
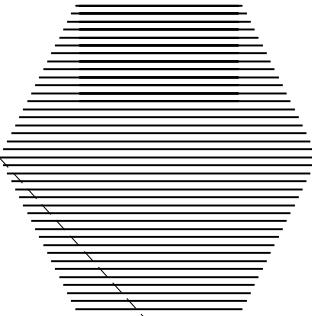
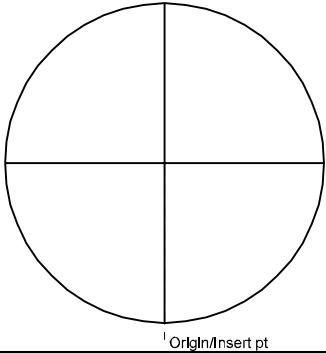
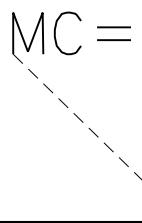
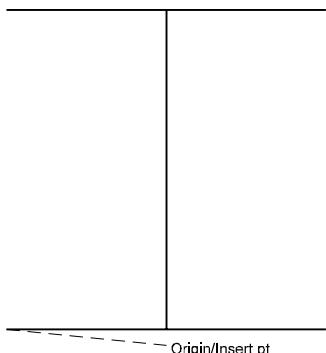
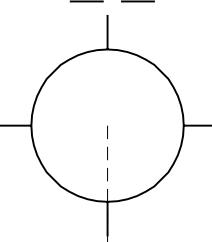
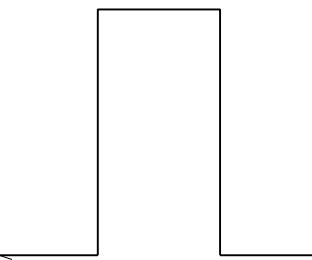
		
Geotechnical: USCS15 SW WELL GRADED SAND Element type: Pattern	Geotechnical: USCS2 CL LEAN CLAY Element type: Pattern	Geotechnical: USCS3 GC CLAYEY GRAVEL Element type: Pattern
		
Geotechnical: USCS4 GM SILTY GRAVEL Element type: Pattern	Geotechnical: USCS5 GP POORLY GRADED GRAVEL Element type: Pattern	Geotechnical: USCS6 GW WELL GRADED GRAVEL Element type: Pattern
		
Geotechnical: USCS7 MH INORGANIC SILT HIGH LIQU Element type: Pattern	Geotechnical: USCS8 ML INORGANIC SILT LOW LIQU Element type: Pattern	Geotechnical: USCS9 OH ORGANIC CLAY OR SILT HIG Element type: Pattern

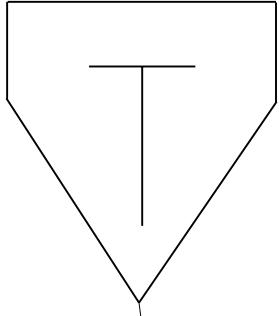
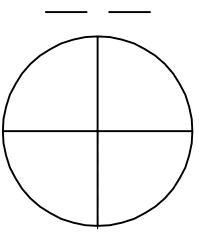
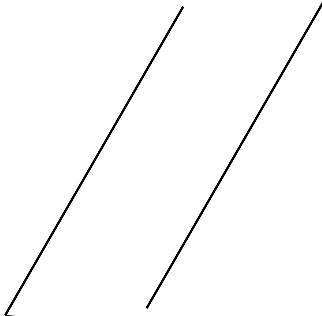
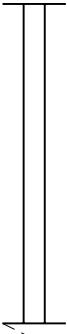
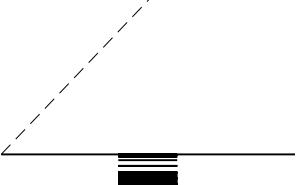
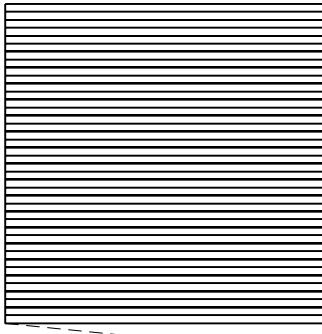
		
<p>Geotechnical: WOOD WOOD SYMBOL Element type: Pattern</p>	<p>Geotechnical: WSJNT WIDELY SPACED JOINTS Element type: Pattern</p>	<p>Geotechnical: ZONECL ZONES OF CORE LOSS Element type: Pattern</p>

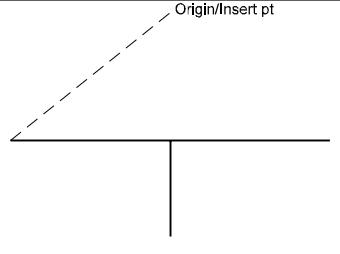
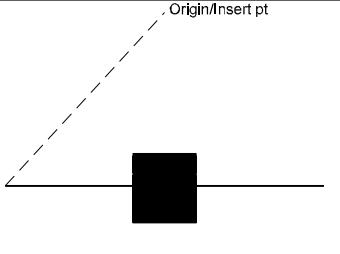
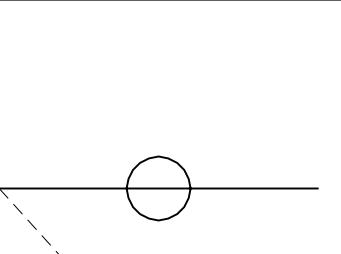
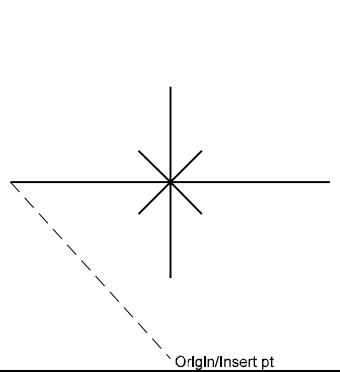
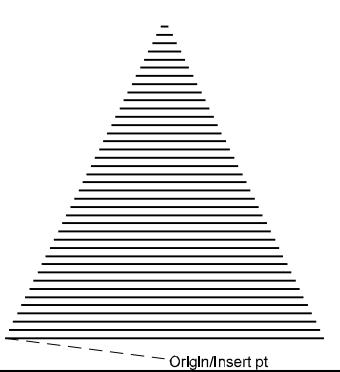
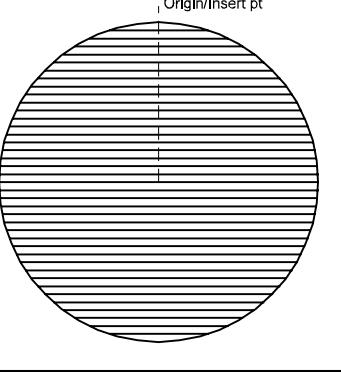
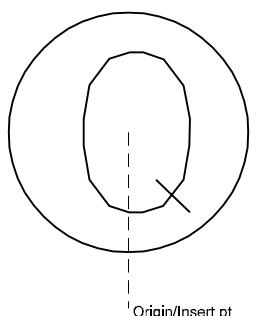
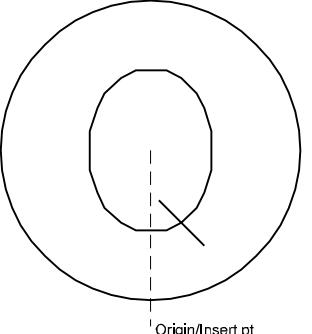
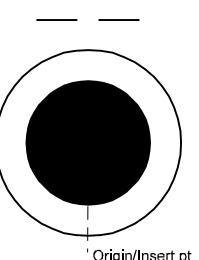
4 Geotechnical Symbols Library

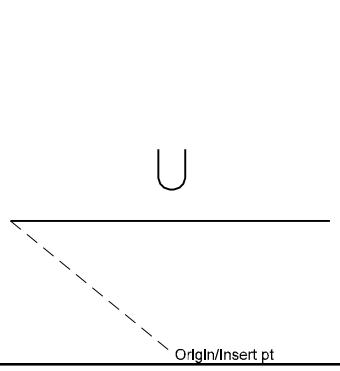
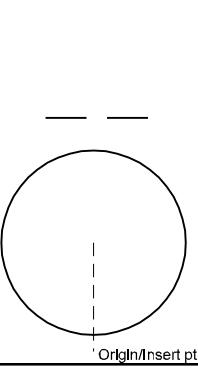
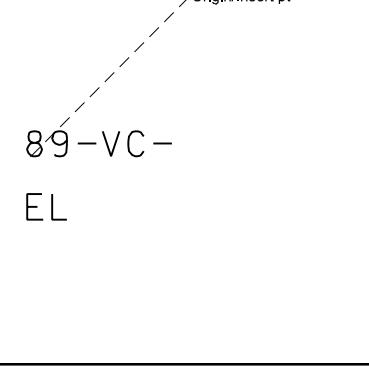
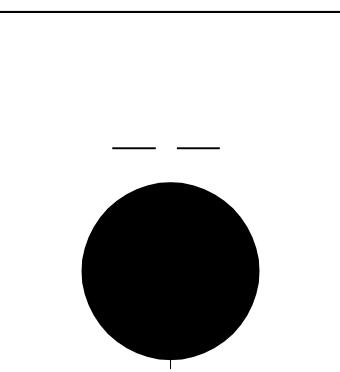
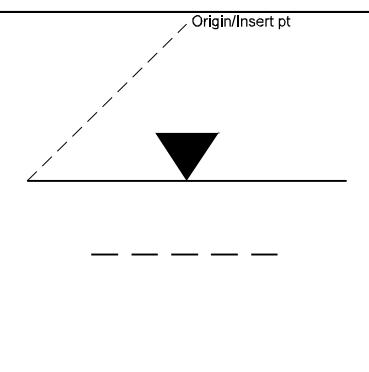
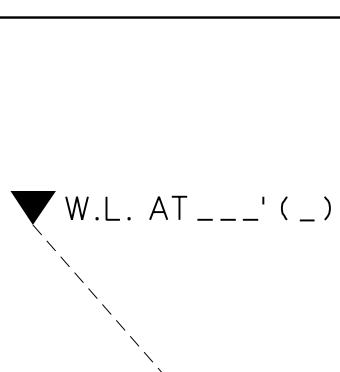
		
Geotechnical: ANCHOL ANG CORED HOLE AR EQ D Element type: Symbol	Geotechnical: ANTICL ANTICLINE Element type: Symbol	Geotechnical: BHHNUM BACKHOE HOLE NUMBER Element type: Symbol
		
Geotechnical: BOLOGR BORING LOG REFUSAL Element type: Symbol	Geotechnical: CCHNUM CONCRETE CORE HOLE NO. Element type: Symbol	Geotechnical: CDRDSH CONSOL DRAINED DIR SHEAR Element type: Symbol
		
Geotechnical: CONDRA CONSOLIDATED DRAINED Element type: Symbol	Geotechnical: CONSOL CONSOLIDATION Element type: Symbol	Geotechnical: CONTST CONSOLIDATION TEST Element type: Symbol

 <p>Origin/Insert pt</p> <p>Geotechnical: CONUDR CONSOLIDATED UNDRAINED Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: CPNHOL CONE PENETROMETER HOLE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: CUDRTT CONSOL UNDRND TRIAXIAL TEST Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Geotechnical: DSCHOL DRIVE SAMPLED SPT AND COR Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: DSHOL DRIVE SAMPLE SPT HOLE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: FBLCK1 FAULT BLOCK MOVEMENT 1 Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Geotechnical: FBLCK2 FAULT BLOCK MOVEMENT 2 Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: HAHNUM HAND AUGER HOLE NUMBER Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Geotechnical: HANGF1 HIGH ANGLE FAULT 1 Element type: Symbol</p>

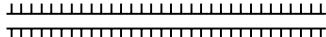
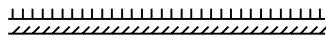
		
Geotechnical: HANGF2 HIGH ANGLE FAULT 2 Element type: Symbol	Geotechnical: HDHNUM HAND DUG HOLE NUMBER Element type: Symbol	Geotechnical: HEXAGN HEXAGON SYMBOL Element type: Symbol
		
Geotechnical: HOLNUM HOLE NUMBER ELEVATION Element type: Symbol	Geotechnical: HRZBED HORIZONTAL BEDS Element type: Symbol	Geotechnical: MOISTC MOISTURE CONTENT Element type: Symbol
		
Geotechnical: NSAHOL NONSAMPLED AREA OF HOL Element type: Symbol	Geotechnical: OBSHOL PIEZOMETER OR OBSERVAT HOLE Element type: Symbol	Geotechnical: OPBLOG OPEN BORING LOG Element type: Symbol

<p>89-PA- EL</p> <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Geotechnical: PAHNUM POWER AUGER HOLE NUMBER Element type: Symbol</p>	<p>Geotechnical: PIEZOM PIEZOMETER Element type: Symbol</p>	<p>Geotechnical: PROPEX PROPOSED EXPLORATION Element type: Symbol</p>
<p>89-PT- EL</p> <p>Origin/Insert pt</p>	<p>89-RD- EL</p> <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Geotechnical: PTHNUM PERC TEST HOLE NUMBER Element type: Symbol</p>	<p>Geotechnical: RDHNUM ROTARY DRILL HOLE NUMBER Element type: Symbol</p>	<p>Geotechnical: RSLASH REFUSAL SLASHES Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Geotechnical: SAMPLE SAMPLE Element type: Symbol</p>	<p>Geotechnical: SDIJNT STRIKE DIP OF INCLINED Element type: Symbol</p>	<p>Geotechnical: SQUARE SQUARE SYMBOL Element type: Symbol</p>

		
Geotechnical: STRKDP STRIKE DIP Element type: Symbol	Geotechnical: STRKVJ STRIKE OF VERTICAL JOI Element type: Symbol	Geotechnical: STRKVP STRIKE W VERTICAL DIP Element type: Symbol
		
Geotechnical: SYNCLN SYNCLINE Element type: Symbol	Geotechnical: TRIANG TRIANGLE SYMBOL Element type: Symbol	Geotechnical: TSTHOL TEST HOLE SYMBOL Element type: Symbol
		
Geotechnical: UCONUD UNCONSOLIDATED UNDRAINED Element type: Symbol	Geotechnical: UCONUT UNCONSOL UNDRND TAXIAL TEST Element type: Symbol	Geotechnical: UDENIS UNDISTURBED DENISON OR PUSH Element type: Symbol

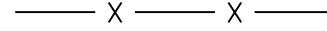
		
Geotechnical: ULIMIT UNSATISFACTORY LIMIT Element type: Symbol	Geotechnical: VCHOL VERTICAL CORE HOLE Element type: Symbol	Geotechnical: VHNUM VIBRACORE HOLE NUMBER Element type: Symbol
		
Geotechnical: WASHBRED WASHBORED Element type: Symbol	Geotechnical: WBHNUM WASH BORING HOLE NUMBER Element type: Symbol	Geotechnical: WLEVDL WATER LEVEL DATA LEFT Element type: Symbol
		
Geotechnical: WTRLEV WATER LEVEL Element type: Symbol		

5 Civil Lines Library

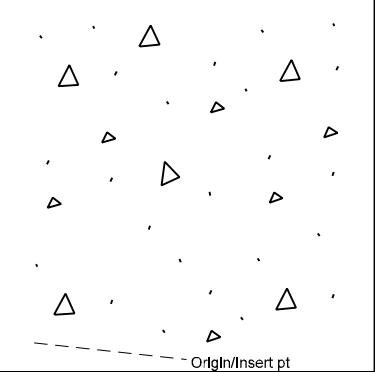
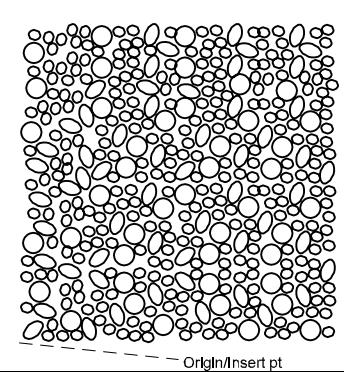
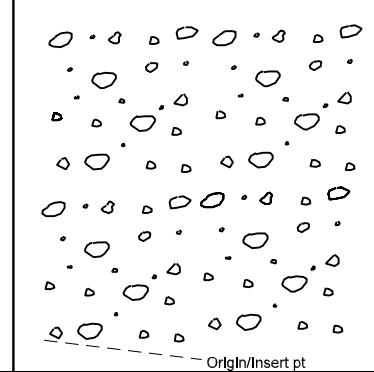
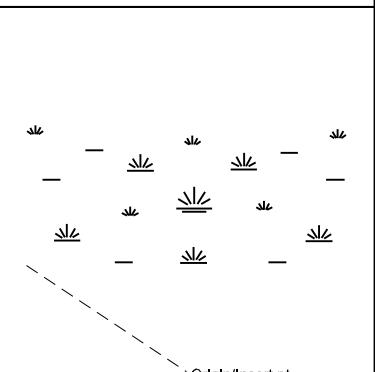
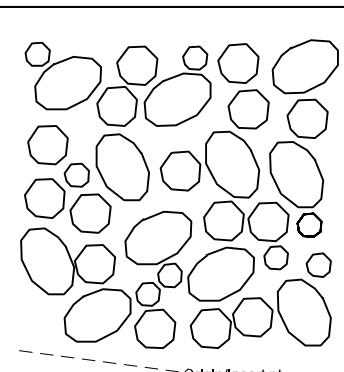
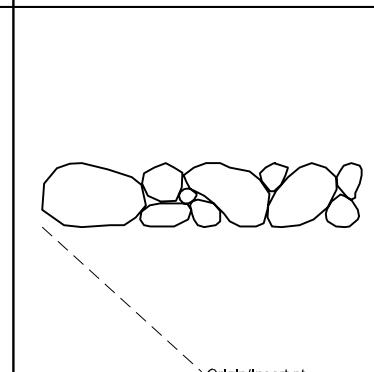
		
Civil:BARDIT DITCH BARRIER Element type: Line	Civil:BARDTB DITCH AND BEAM BARRIER Element type: Line	Civil:BARGEN GENERIC SECURITY BARRIER Element type: Line
		
Civil:BARMAS SECURITY MASONRY BARRIER Element type: Line	Civil:CONLMT CONSTRUCTION LIMIT Element type: Line	Civil:CULVRT CULVERT PIPE Element type: Line
		
Civil:DITCH DITCH LINE Element type: Line	Civil:FENCE FENCE Element type: Line	Civil:FIRE FIRE PROTECTION WATR SUPPLY Element type: Line

	— F O R —	— F O S —	— F O V —
Civil:FUELR FUEL OIL RETURN Element type: Line	Civil:FUELOS FUEL OIL SUPPLY Element type: Line	Civil:FUELOV FUEL OIL TANK VENT Element type: Line	
— — — —	— — — —	□	— — — —
Civil:GOVTKL GOVERNMENT TAKING LINE Element type: Line	Civil:GUARD GUARD RAIL Element type: Line	Civil:IDXDC INDEX DEPTH CONTOUR Element type: Line	
— I W —	— L P G —	— — — —	
Civil:IWASTE INDUSTRIAL WASTE Element type: Line	Civil:LIQPET LIQUID PETROLEUM GAS Element type: Line	Civil:MINRDC MINOR DEPTH CONTOUR Element type: Line	

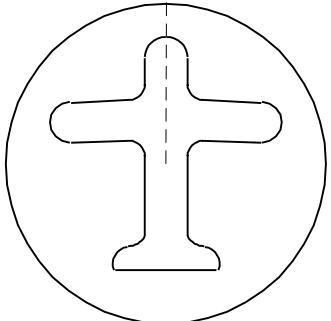
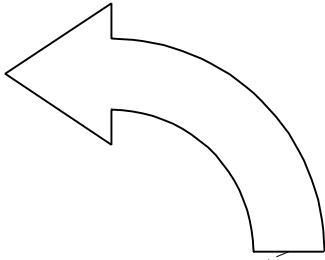
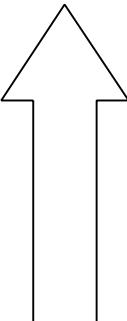
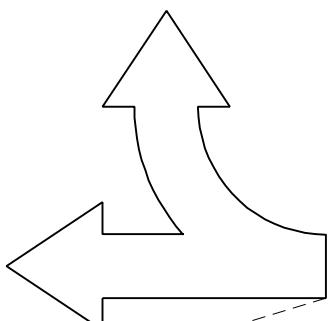
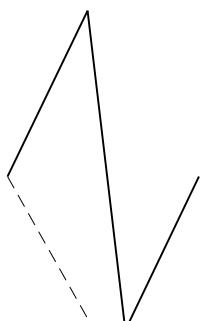
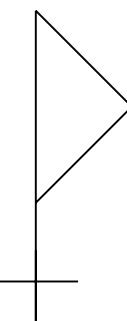
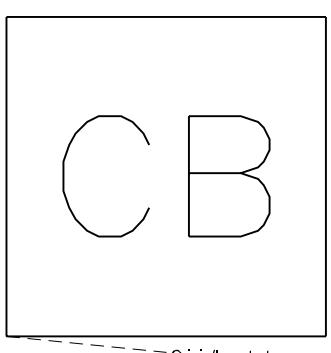
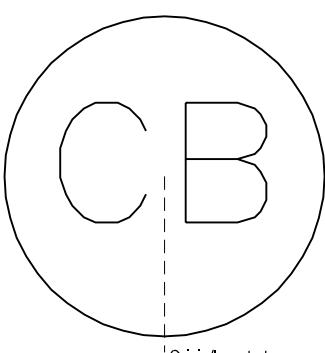
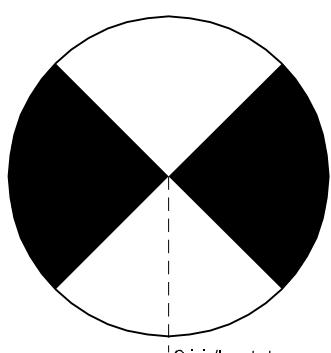
	N P W	G	G _X
Civil:NONPOT NONPOTABLE WATER Element type: Line	Civil:NTGASN NATURAL GAS Element type: Line	Civil:NTGASX EXIST NATURAL GAS Element type: Line	
	P L		
Civil:PROJBL PROJECT BOUNDARY LINE Element type: Line	Civil:PROPL PROPERTY LINE Element type: Line	Civil:RAILRD RAILROAD Element type: Line	
R / W	S S	S S _X	
Civil:RTOFWY RIGHT OF WAY Element type: Line	Civil:SSWAF SANITARY SEWER Element type: Line	Civil:SSWAFX EXISTING SANITARY SEWER Element type: Line	

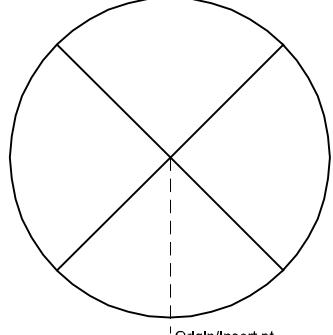
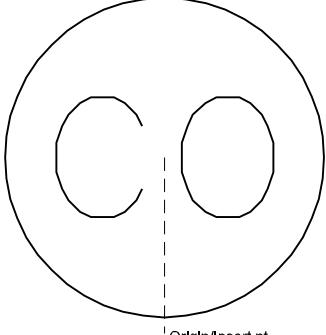
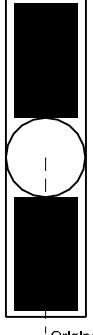
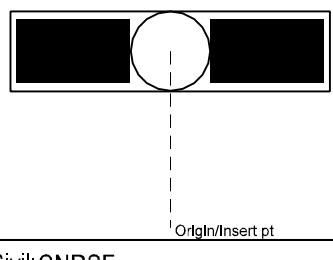
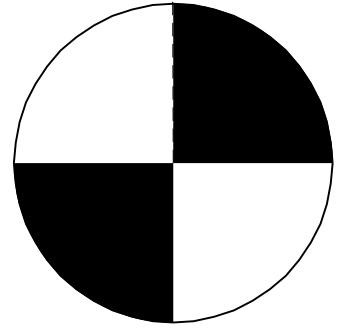
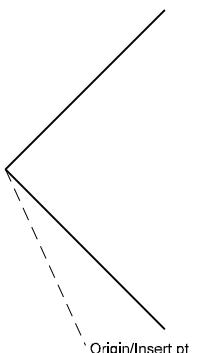
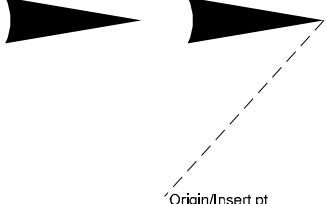
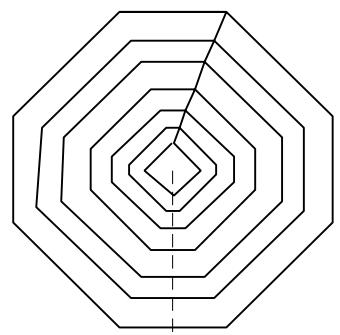
		
Civil:STRAF STORM DRAIN Element type: Line	Civil:STRAFX EXISTING STORM DRAIN Element type: Line	Civil:TREEL TREE LINE Element type: Line
		
Civil:WATERL WATER LINE Element type: Line	Civil:WATRX EXISTING WATER LINE Element type: Line	Civil:WWFBRC WELDED WIRE FABRIC Element type: Line

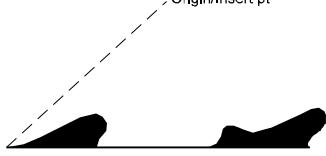
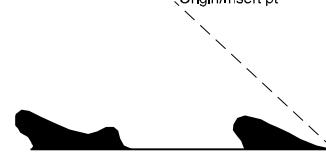
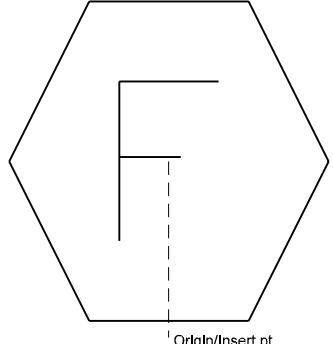
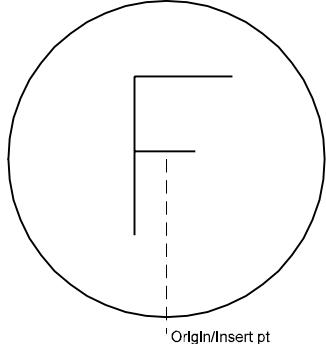
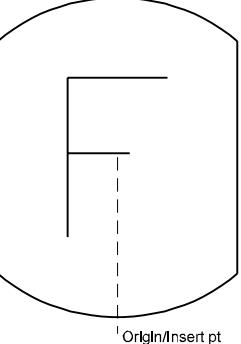
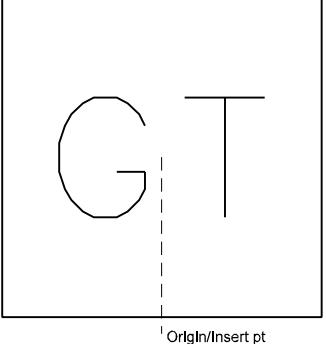
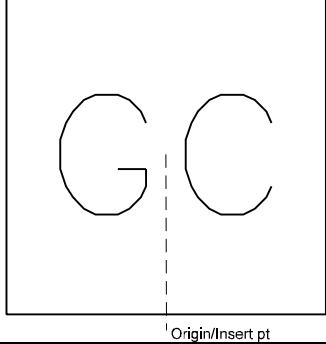
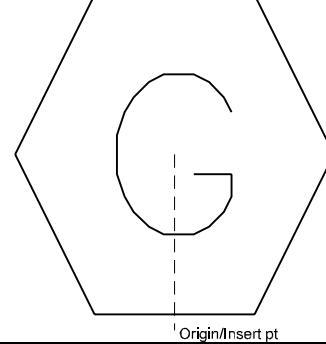
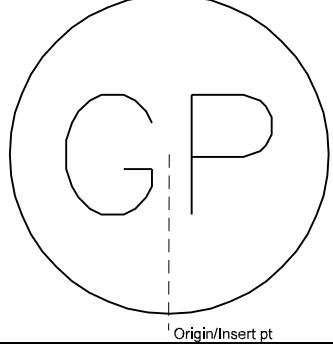
5 Civil Patterns Library

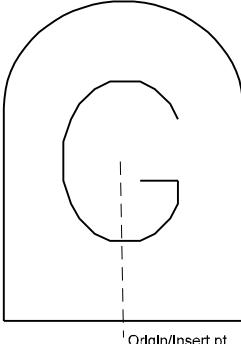
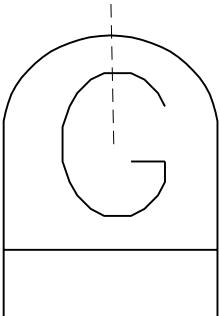
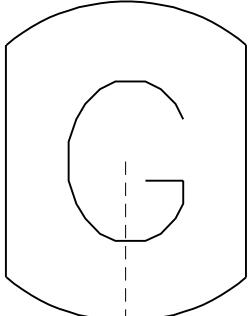
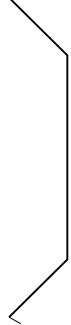
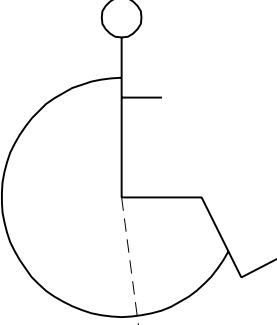
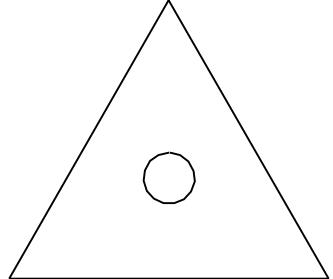
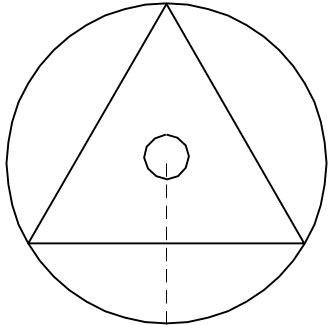
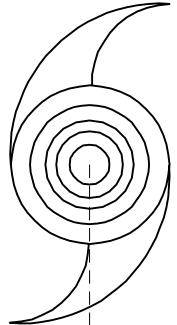
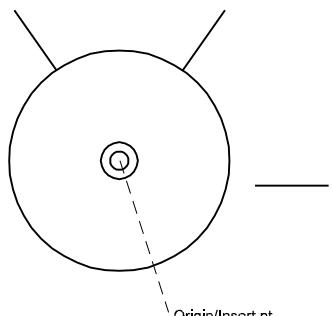
		
Civil:CONCST CONCRETE STONE Element type: Pattern	Civil:FILTBD FILTRATION BED Element type: Pattern	Civil:GRAVEL GRAVEL Element type: Pattern
		
Civil:LSWAMP LARGE SWAMP Element type: Pattern	Civil:POROUS POROUS Element type: Pattern	Civil:RIPRAP RIPRAP PATTERN Element type: Pattern

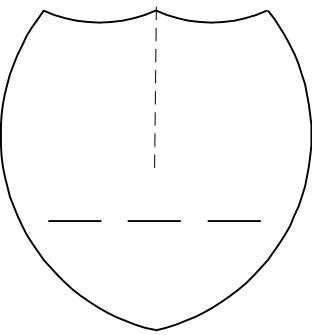
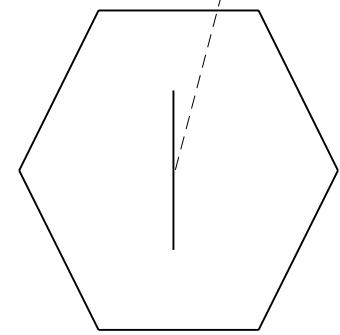
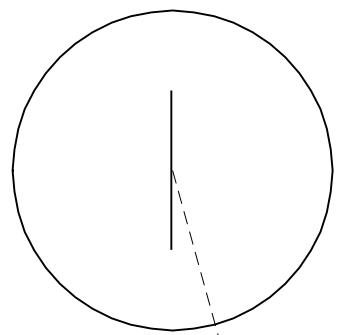
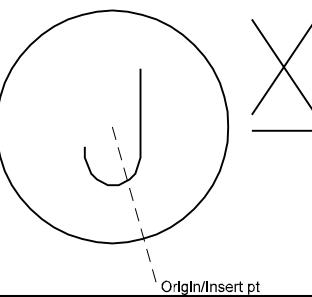
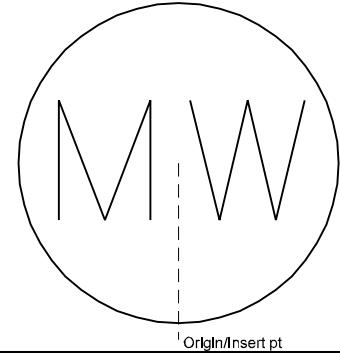
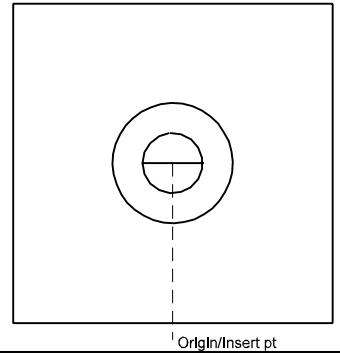
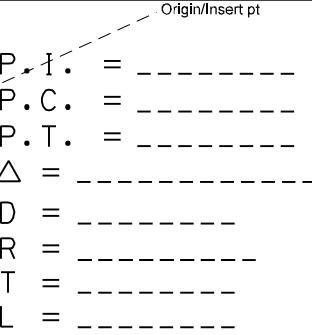
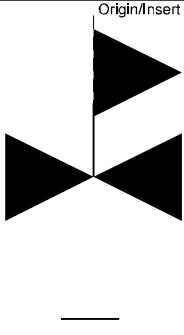
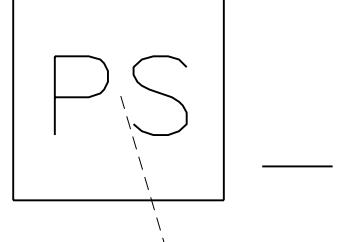
5 Civil Symbols Library

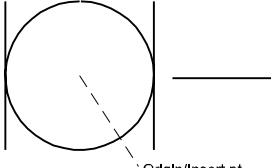
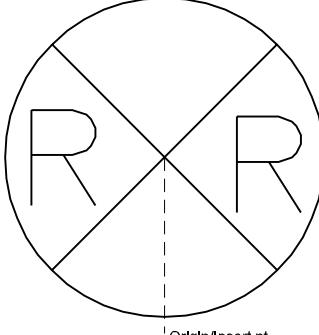
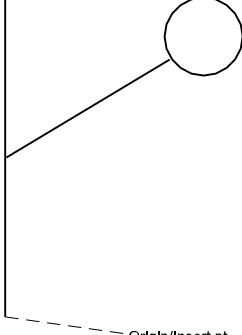
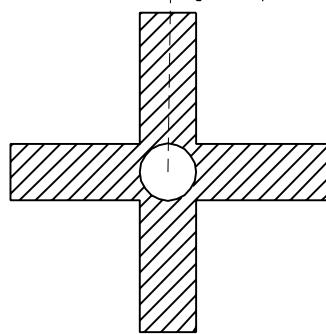
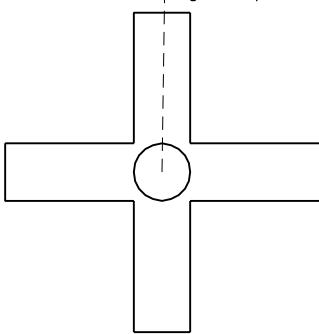
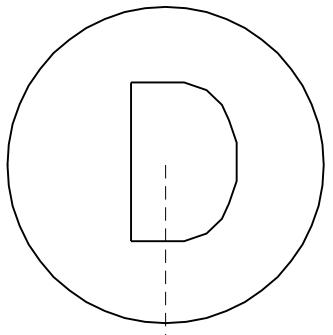
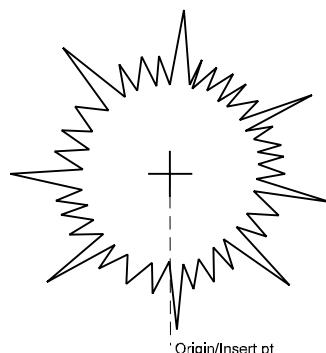
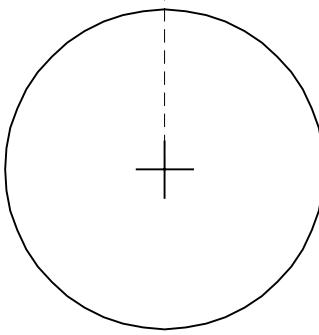
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Civil:CATBSN CATCH BASIN Element type: Symbol</p>	<p>Civil:CATBSR ROUND CATCH BASIN Element type: Symbol</p>	<p>Civil:CDHDR CORE DRILL HOLE DRILLED Element type: Symbol</p>

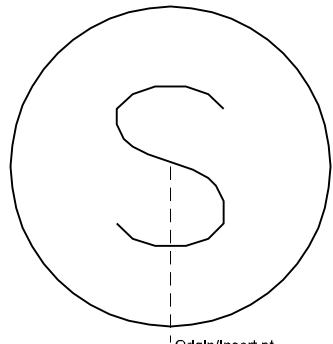
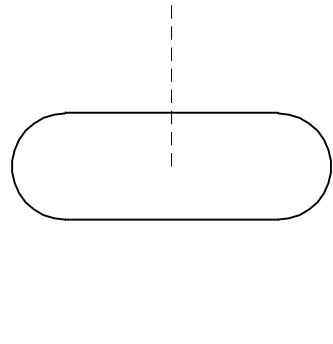
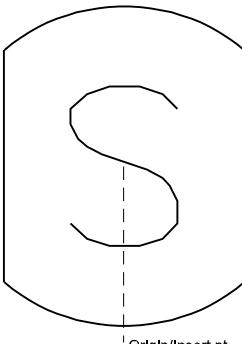
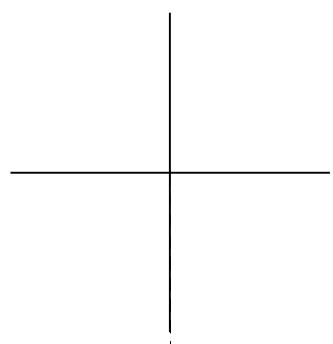
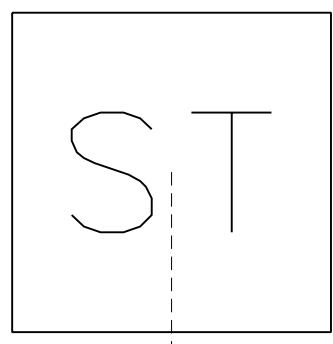
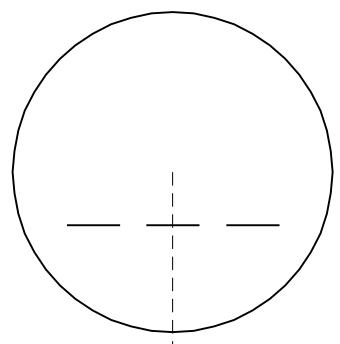
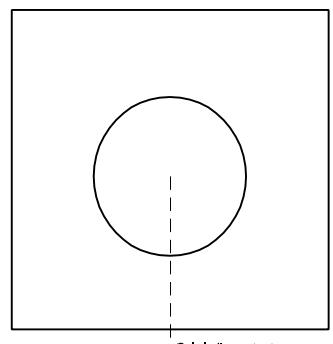
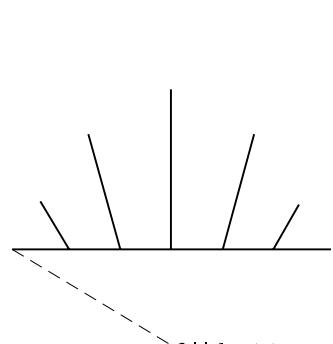
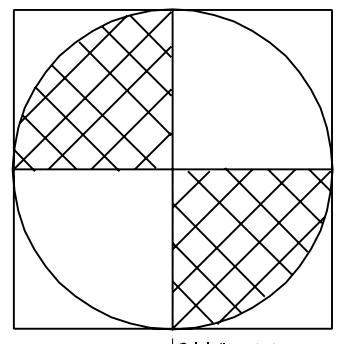
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil: CDHUDR CORE DRILL HOLE UNDRILLED Element type: Symbol	Civil: CLNOUT CLEANOUT Element type: Symbol	Civil: CNR90 CORNER SOLID 90 Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil: CNRSF CORNER SOLID FLAT Element type: Symbol	Civil: CNTLIN CENTERLINE SYMBOL Element type: Symbol	Civil: COGRAV CENTER OF GRAVITY SYMBOL Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil: CULVEE CULVERT END SYMBOL Element type: Symbol	Civil: DBLARR DOUBLE ARROW TERMINATOR Element type: Symbol	Civil: DRLHOL DRILL HOLE Element type: Symbol

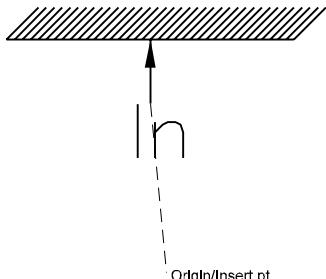
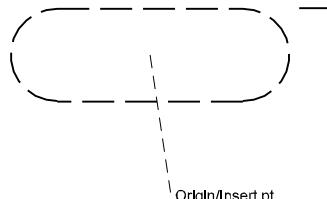
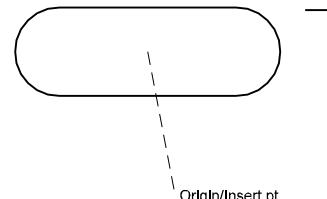
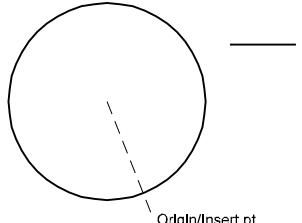
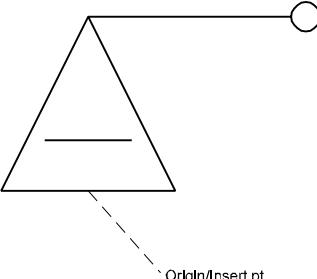
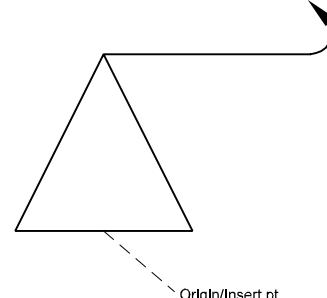
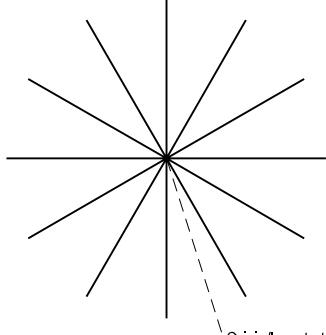
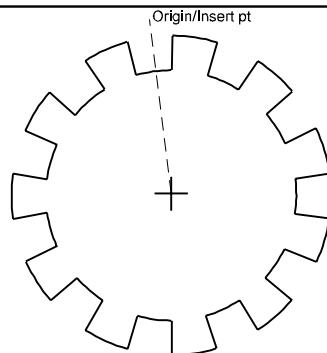
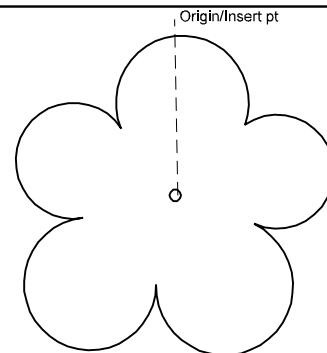
 FLOW	 FLOW	 FOMETR FUEL OIL METER
Civil:FLARRL FLOW ARROW LEFT IN 0 POINT Element type: Symbol	Civil:FLARRR FLOW ARROW RIGHT IN 0 POINT Element type: Symbol	Civil:FOMETR FUEL OIL METER Element type: Symbol
 FOMHOL FUEL OIL MANHOLE Element type: Symbol	 FOVALT FUEL OIL VAULT Element type: Symbol	 GREASE GREASE TRAP Element type: Symbol
 GRITCH GRIT CHAMBER Element type: Symbol	 GSMETR GAS METER Element type: Symbol	 GSPLNT GAS PLANT Element type: Symbol

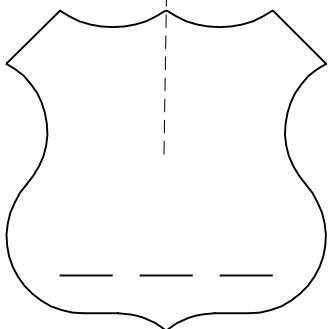
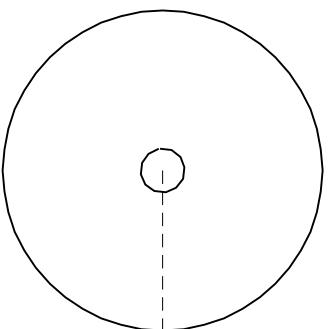
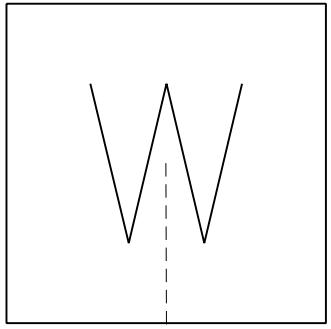
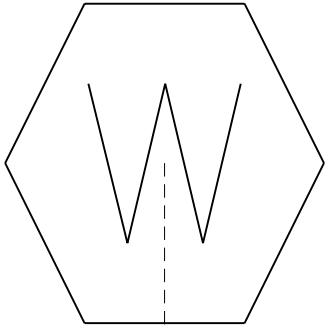
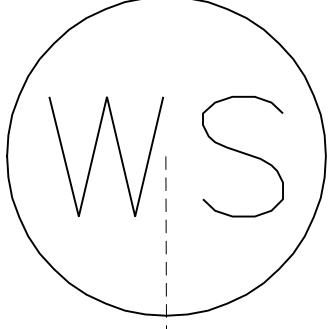
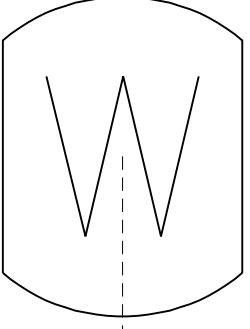
		
Civil: GSRECR GAS RECEIVER Element type: Symbol	Civil: GSTRAP GAS TRAP Element type: Symbol	Civil: GSVALT GAS VALVE VAULT Element type: Symbol
		
Civil: HEADWL HEADWALL Element type: Symbol	Civil: HNDCAP HANDICAP CHAIR SYMBOL Element type: Symbol	Civil: HORCPT HORIZONTAL CONTROL PT Element type: Symbol
		
Civil: HOVCPT HORIZ VERT CONTROL PT Element type: Symbol	Civil: HUREYE HURRICANE EYE Element type: Symbol	Civil: HYDRNT HYDRANT Element type: Symbol

		
Civil:INSHWY INTERSTATE HIGHWAY SYMBOL Element type: Symbol	Civil:IWMETR INDUSTRIAL WASTE WATR METER Element type: Symbol	Civil:IWMHOL INDUSTRIAL WASTE WATR MANHL Element type: Symbol
		
Civil:JNBX EXTERIOR UTIL JUNCTION BOX Element type: Symbol	Civil:MONWEL MONITORING WELL Element type: Symbol	Civil:PHOCPT PHOTO CONTROL POINT Element type: Symbol
 <p>P.I. = ----- P.C. = ----- P.T. = ----- Δ = ----- D = ----- R = ----- T = ----- L = -----</p>		
Civil:PIINFO PI INFORMATION Element type: Symbol	Civil:PIVALV POST INDICATOR VALVE Element type: Symbol	Civil:PMPSTA PUMP STATION Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil:RGVALV REGULATOR VALVE Element type: Symbol	Civil:RRSIGN RAIL SIGNAL Element type: Symbol	Civil:RRSWTC RAIL SWITCH Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil:SCNRH SECTION CORNER HATCHED Element type: Symbol	Civil:SCNRO SECTION CORNER OPEN Element type: Symbol	Civil:SDMHOL STORM DRAINAGE MANHOLE Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Civil:SHRUBC CONIFEROUS SHRUB Element type: Symbol	Civil:SHRUBD DECIDUOUS SHRUB Element type: Symbol	Civil:SIGN SIGN Element type: Symbol

		
Civil: SNMHOL SANITARY MANHOLE Element type: Symbol	Civil: SNPVSL SANITARY PRESSURE VESSEL Element type: Symbol	Civil: SVALT SANITARY VALVE VAULT Element type: Symbol
		
Civil: SPOTEL GROUND SPOT ELEVATION Element type: Symbol	Civil: SPTANK SEPTIC TANK Element type: Symbol	Civil: STHWY STATE HIGHWAY SYMBOL Element type: Symbol
		
Civil: STMPIT STEAM PIT Element type: Symbol	Civil: SWAMP SWAMP Element type: Symbol	Civil: TIDEG TIDE GAGE Element type: Symbol

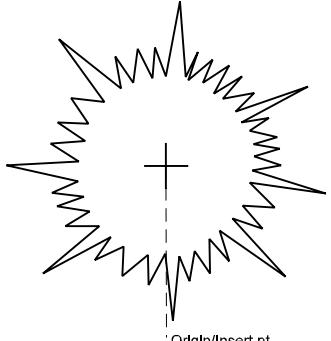
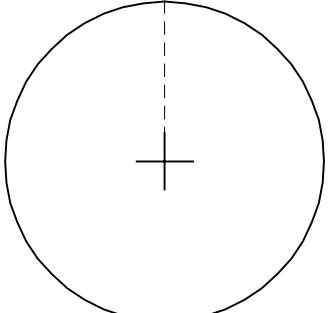
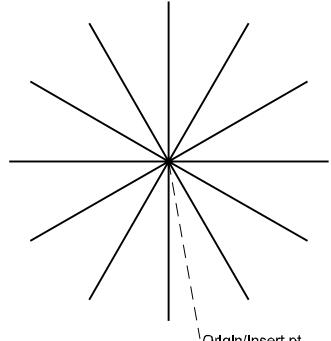
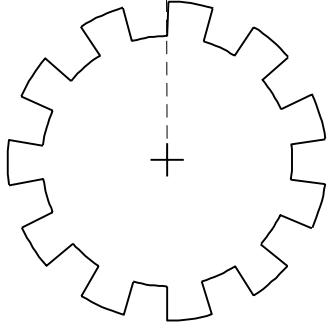
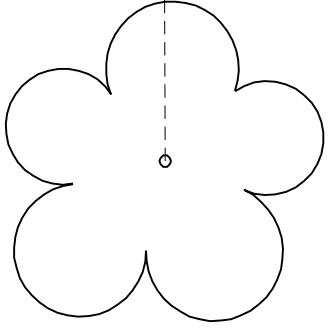
		
Civil:TIRETR TIRE TREDDLE Element type: Symbol	Civil:TNKBG TANK BELOW GROUND Element type: Symbol	Civil:TNKHAG TANK HORIZ ABOVE GROUND Element type: Symbol
		
Civil:TNKVAG TANK VERTICAL ABOVE GROUND Element type: Symbol	Civil:TRACR TRAFFIC ARM WTH CARD READER Element type: Symbol	Civil:TRAMS TRAFFIC ARM MECHANCL SWING Element type: Symbol
		
Civil:TREEC CONIFEROUS TREE Element type: Symbol	Civil:TREED DECIDUOUS TREE Element type: Symbol	Civil:TREEG GENERIC TREE Element type: Symbol

	<p style="text-align: center;">V . C . P . I . S T A . E L . M =</p> <p style="text-align: center; font-size: small;">Origin/Insert pt</p>	
<p>Civil:USHWY US HIGHWAY SYMBOL Element type: Symbol</p>	<p>Civil:VCDATA VERTICAL CURVE DATA Element type: Symbol</p>	<p>Civil:VERCPT VERTICAL CONTROL POINT Element type: Symbol</p>
		
<p>Civil:WAHHOL WATER HANHOLE Element type: Symbol</p>	<p>Civil:WAMETR WATER METER Element type: Symbol</p>	<p>Civil:WAPLNT WATER PLANT Element type: Symbol</p>
		
<p>Civil:WASOFT WATER SOFTENER Element type: Symbol</p>	<p>Civil:WAVALT WATER VALVE VAULT Element type: Symbol</p>	

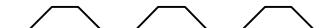
6 Landscape Lines Library

		
Landscape:FENCE FENCE Element type: Line	Landscape:LAWNSP LAWN SPRINKLER SUPPLY Element type: Line	Landscape:TREEL TREE LINE Element type: Line

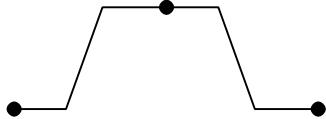
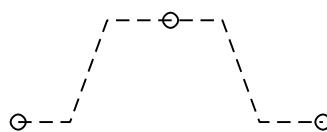
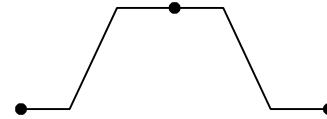
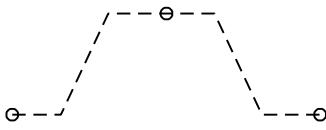
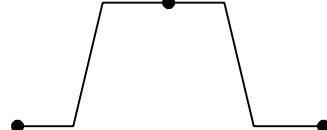
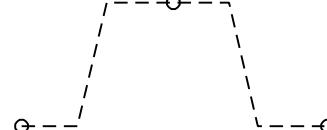
6 Landscape Symbols Library

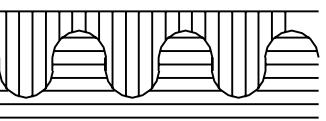
		
<p>Landscape:SHRUBC CONIFEROUS SHRUB Element type: Symbol</p>	<p>Landscape:SHRUBD DECIDUOUS SHRUB Element type: Symbol</p>	<p>Landscape:TREEC CONIFEROUS TREE Element type: Symbol</p>
		
<p>Landscape:TREED DECIDUOUS TREE Element type: Symbol</p>	<p>Landscape:TREEG GENERIC TREE Element type: Symbol</p>	

7 Structural Lines Library

		
Structural:BERM BERM Element type: Line	Structural:CMP127 CMP 127MMX25MM OR 5IN X 1IN Element type: Line	Structural:CMP152 CMP 152MMX51MM OR 6IN X 2IN Element type: Line
		
Structural:CMP38 CMP38MMX6MM OR 1.5INX.25IN Element type: Line	Structural:CMP51 CMP51MMX13MM OR 2IN X .5IN Element type: Line	Structural:CMP68 CMP68MMX13MM OR 2.7INX.5IN Element type: Line
		
Structural:CMP76 CMP76MMX25MM OR 3IN X 1IN Element type: Line	Structural:DECKCR CORRUGATED METAL DECK Element type: Line	Structural:DECKFL METAL DECK FLOOR Element type: Line

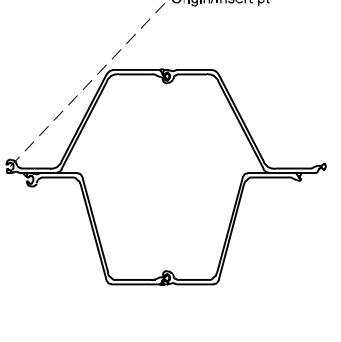
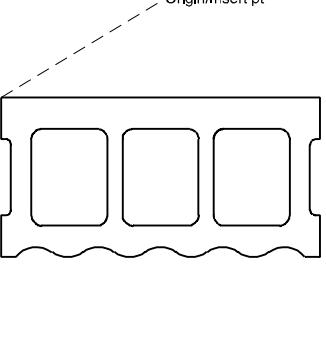
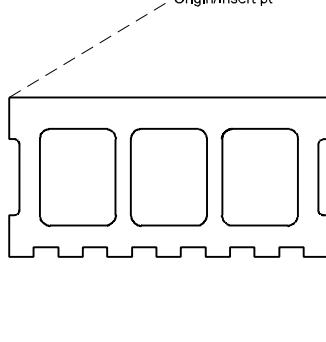
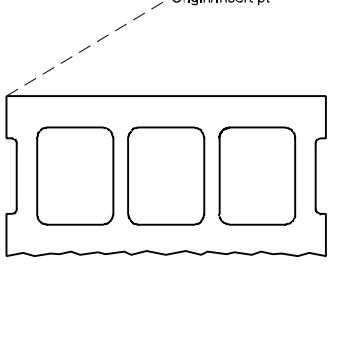
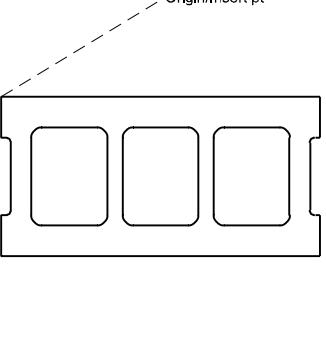
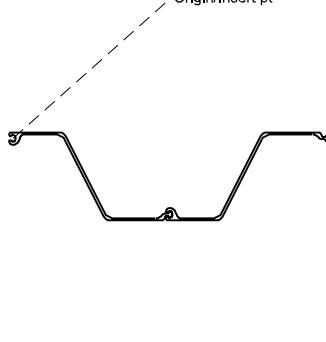
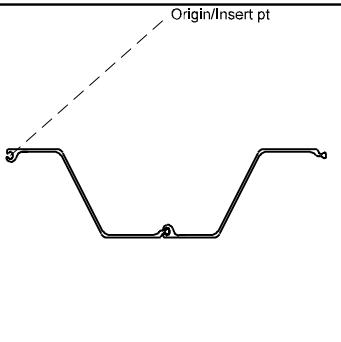
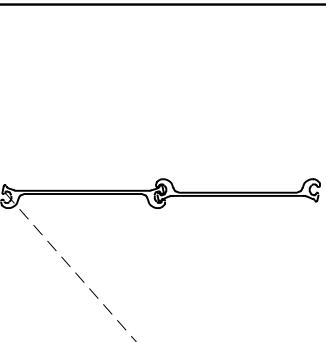
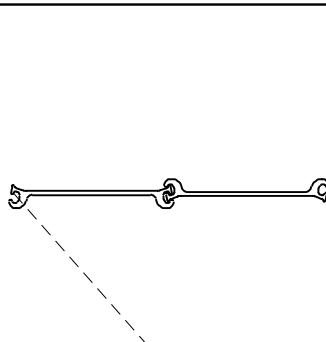
Structural:DECKRF METAL DECK ROOF Element type: Line	Structural:GROUND GROUND Element type: Line	Structural:INTRLK INTERLOCK SLOPE PROTECTION Element type: Line
Structural:PS31 PS31 SHEET PILE Element type: Line	Structural:PS31H PS31 SHEET PILE HIDDEN Element type: Line	Structural:PSA23 PSA23 SHEET PILE Element type: Line
Structural:PSA23H PSA23 SHEET PILE HIDDEN Element type: Line	Structural:PZ22 PZ22 SHEET PILE Element type: Line	Structural:PZ22H PZ22 SHEET PILE HIDDEN Element type: Line

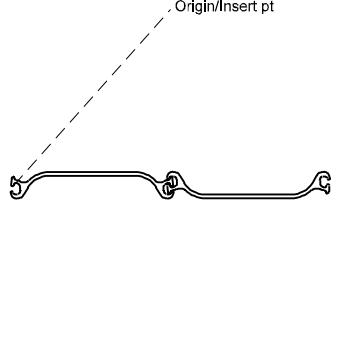
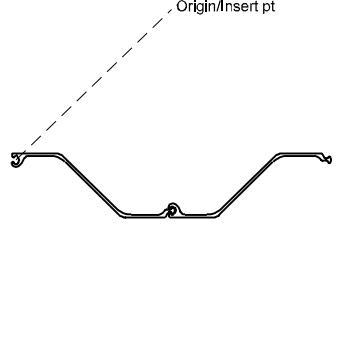
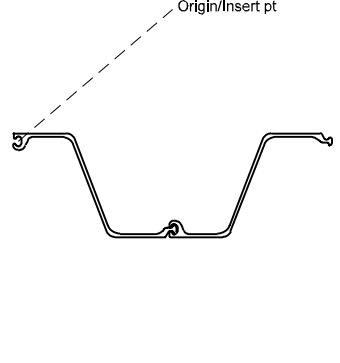
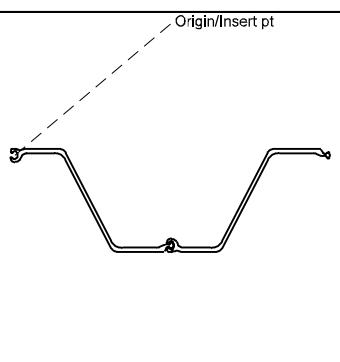
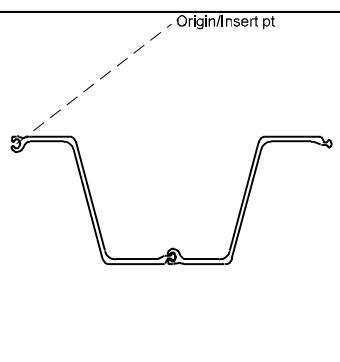
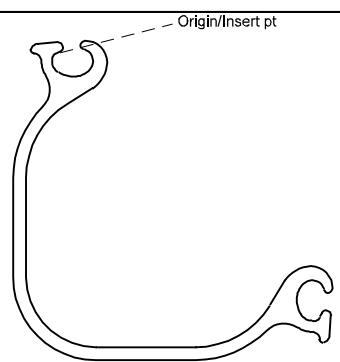
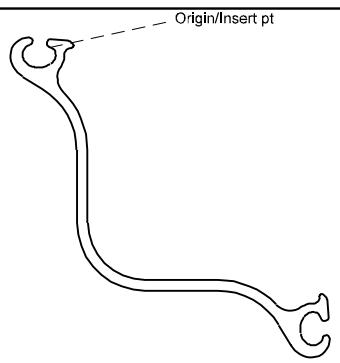
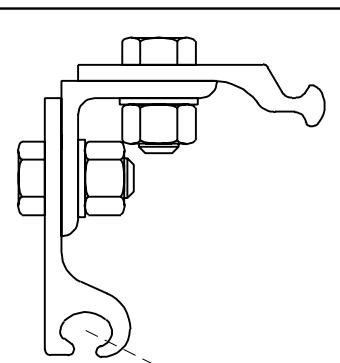
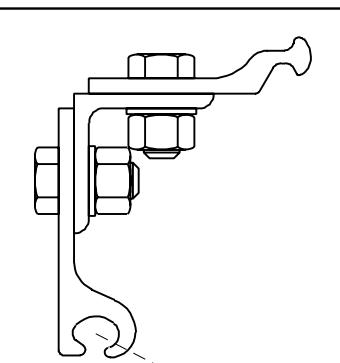
		
Structural:PZ27 PZ27 SHEET PILE Element type: Line	Structural:PZ27H PZ27 SHEET PILE HIDDEN Element type: Line	Structural:PZ35 PZ35 SHEET PILE Element type: Line
		
Structural:PZ35H PZ35 SHEET PILE HIDDEN Element type: Line	Structural:PZ40 PZ40 SHEET PILE Element type: Line	Structural:PZ40H PZ40 SHEET PILE HIDDEN Element type: Line
		
Structural:REBR12 REBAR AT 12IN Element type: Line	Structural:REBR18 REBAR AT 18IN Element type: Line	Structural:REBR6 REBAR AT 6IN Element type: Line

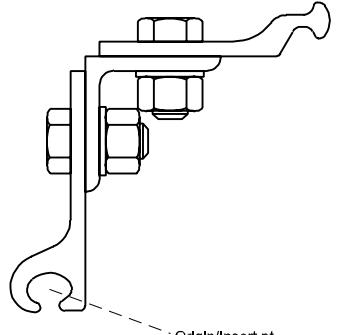
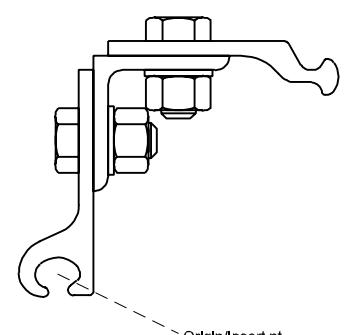
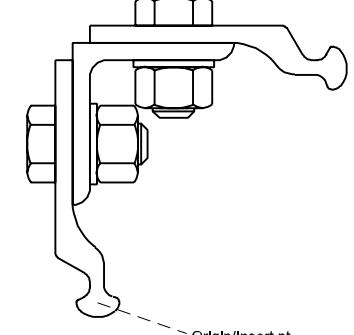
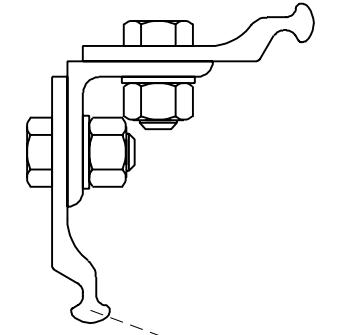
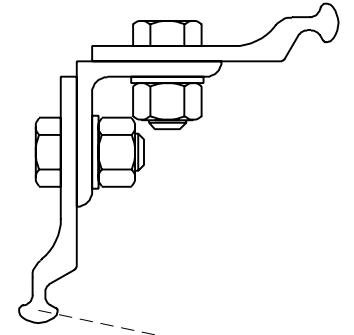
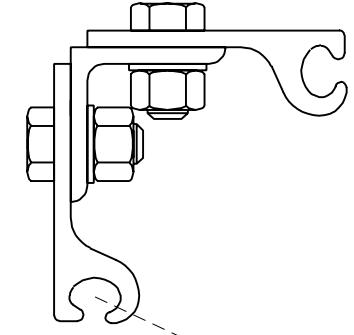
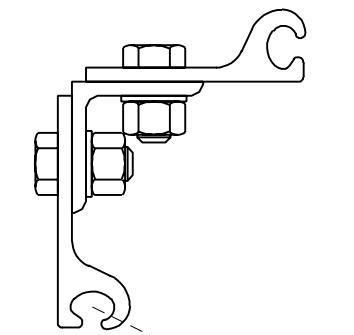
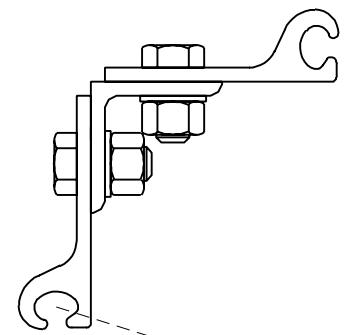
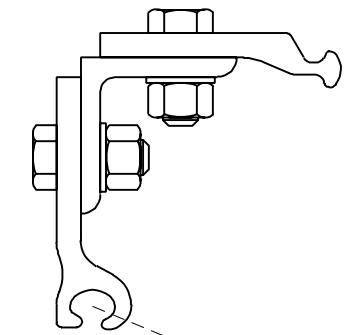
		
Structural:REBR9 REBAR AT 9IN Element type: Line	Structural:RIPPLN RIPRAP PLAN VIEW Element type: Line	Structural:ROCK ROCK Element type: Line
		
Structural:SHORLN SHORE LINE Element type: Line	Structural:WWFBRC WELDED WIRE FABRIC Element type: Line	

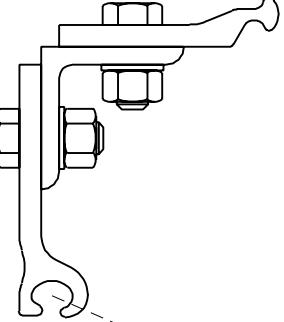
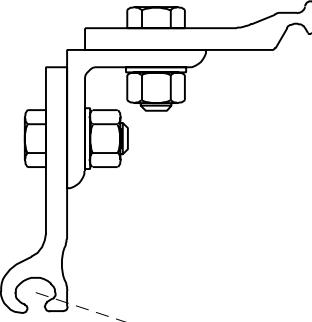
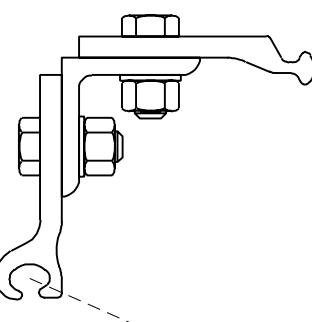
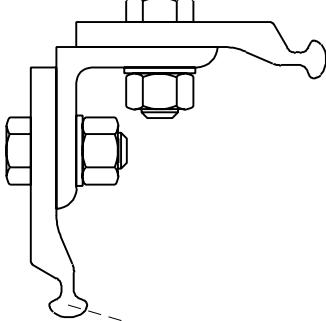
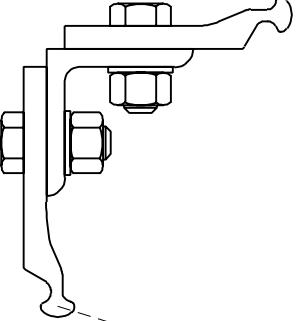
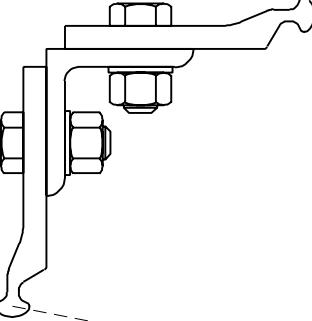
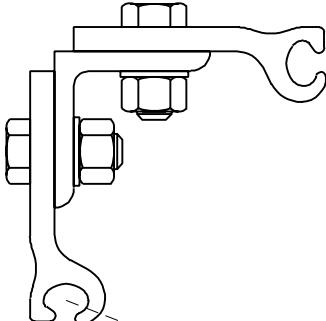
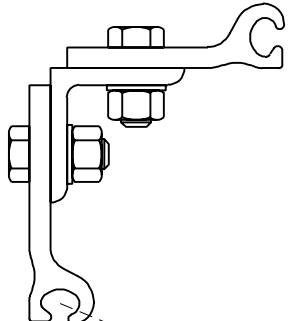
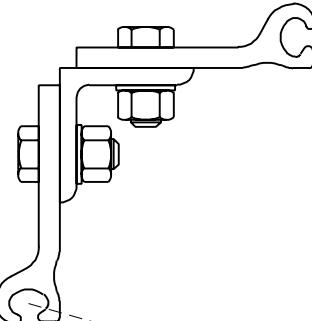
7 Structural Objects Library

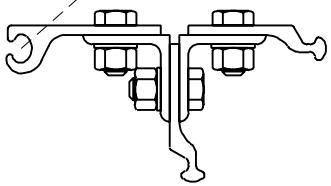
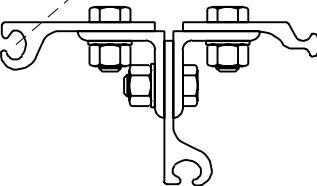
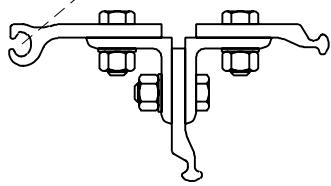
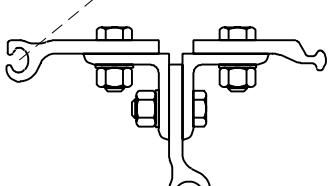
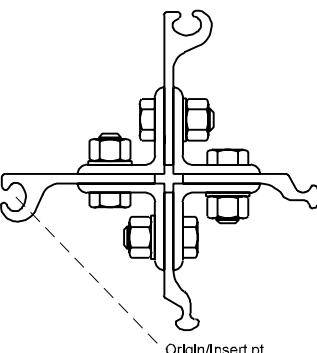
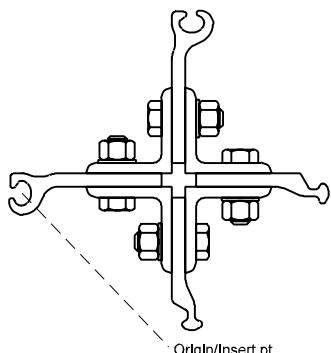
Structural:4FRB 4 IN FLAT RIBBED Element type: Object	Structural:6FRBHD 6 IN FLAT RIBBED HVY DTY Element type: Object	Structural:6FRBLW 6 IN FLAT RIBBED LT WT Element type: Object
Structural:6RCBHD 6 IN RIB W CTR BULB HVY DTY Element type: Object	Structural:6RCLBW 6 IN RIB W CTR BULB LT WT Element type: Object	Structural:9FLBHD 9 IN FLAT RIBBED HVY DTY Element type: Object
Structural:9FRBLW 9 IN FLAT RIBBED LT WT Element type: Object	Structural:9RCBHD 9 IN RIB W CTR BULB HVY DTY Element type: Object	Structural:9RCLBW 9 IN RIB W CTR BULB LT WT Element type: Object

		
<p>Structural:BOX BOX PILE Element type: Object</p>	<p>Structural:CMUFL FLUTED CONC BLK 8X8X16 Element type: Object</p>	<p>Structural:CMURIB RIBBED CONC BLK 8X8X16 Element type: Object</p>
		
<p>Structural:CMUSF SPLIT FACE CONC BLK 8X8X16 Element type: Object</p>	<p>Structural:CMUSTR CONC BLOCK 8X8X16 STR. Element type: Object</p>	<p>Structural:PLZ23 PLZ23 SHEET PILING Element type: Object</p>
		
<p>Structural:PLZ25 PLZ25 SHEET PILING Element type: Object</p>	<p>Structural:PS27.5 PS27.5 SHEET PILE Element type: Object</p>	<p>Structural:PS31 PS31 SHEET PILE Element type: Object</p>

		
Structural:PSA23 PSA23 SHEET PILE Element type: Object	Structural:PZ22 PZ22 SHEET PILE Element type: Object	Structural:PZ27 PZ27 SHEET PILE Element type: Object
		
Structural:PZ35 PZ35 SHEET PILE Element type: Object	Structural:PZ40 PZ40 SHEET PILE Element type: Object	Structural:RC230 RC230 SHEET PILE CONNECTION Element type: Object
		
Structural:RC231 RC231 SHEET PILE CONNECTION Element type: Object	Structural:ZC270 PZ22 PZ27 L CONNECTION Element type: Object	Structural:ZC271 PZ22 PZ27 L CONNECTION Element type: Object

		
Structural: ZC272 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC273 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC274 PZ22 PZ27 L CONNECTION Element type: Object
		
Structural: ZC275 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC276 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC277 PZ22 PZ27 L CONNECTION Element type: Object
		
Structural: ZC278 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC279 PZ22 PZ27 L CONNECTION Element type: Object	Structural: ZC350 PZ35 PZ40 L CONNECTION Element type: Object

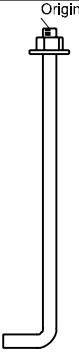
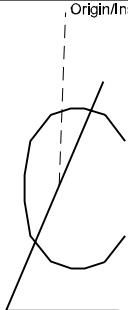
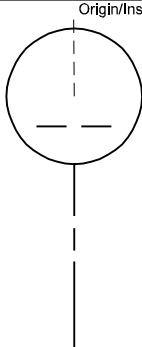
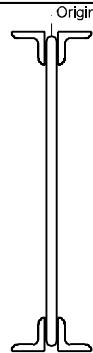
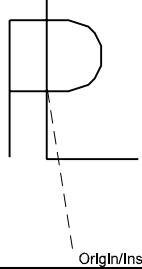
		
Structural:ZC351 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC352 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC353 PZ35 PZ40 L CONNECTION Element type: Object
		
Structural:ZC354 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC355 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC356 PZ35 PZ40 L CONNECTION Element type: Object
		
Structural:ZC357 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC358 PZ35 PZ40 L CONNECTION Element type: Object	Structural:ZC359 PZ35 PZ40 L CONNECTION Element type: Object

		
Structural: ZT270 PZ22 PZ27 T CONNECTION Element type: Object	Structural: ZT271 PZ22 PZ27 T CONNECTION Element type: Object	Structural: ZT350 PZ35 PZ40 T CONNECTION Element type: Object
		
Structural: ZT351 PZ35 PZ40 T CONNECTION Element type: Object	Structural: ZX270 PZ22 PZ27 CROSS CONNECTION Element type: Object	Structural: ZX350 PZ35 PZ40 CROSS CONNECTION Element type: Object

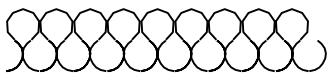
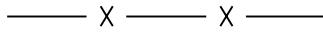
7 Structural Patterns Library

A field of small, open triangles scattered across a rectangular area. A dashed line labeled "Origin/Insert pt" extends from the bottom left corner of the field.	A series of parallel diagonal lines forming a hatching pattern. A dashed line labeled "Origin/Insert pt" extends from the bottom right corner of the pattern.	A field of small, irregular closed shapes (dashed circles) scattered across a rectangular area. A dashed line labeled "Origin/Insert pt" extends from the bottom right corner of the field.
<p>Structural: CONCST CONCRETE STONE Element type: Pattern</p>	<p>Structural: EEARHT EXISTING EARTH Element type: Pattern</p>	<p>Structural: GRAVEL GRAVEL Element type: Pattern</p>

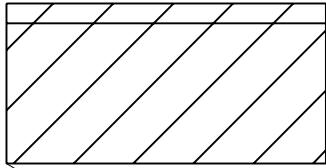
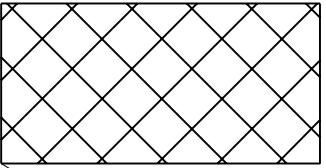
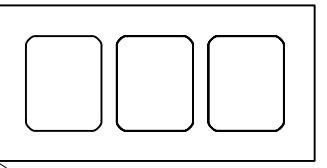
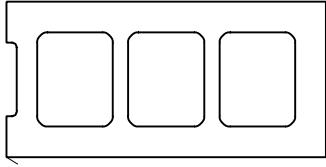
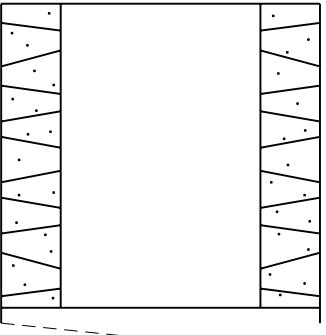
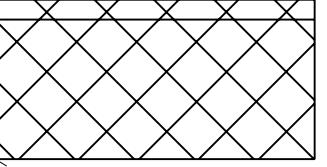
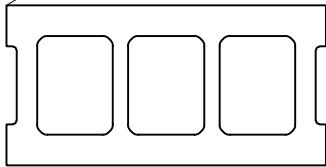
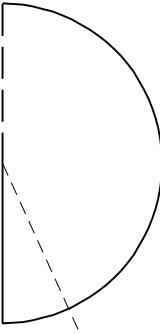
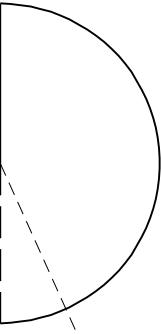
7 Structural Symbols Library

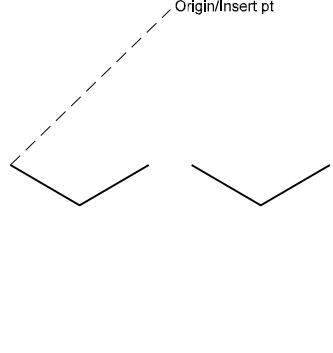
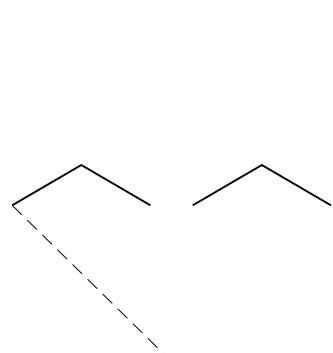
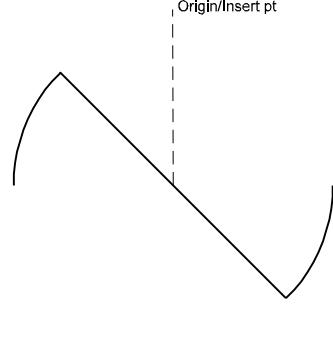
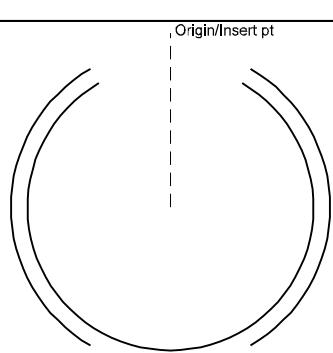
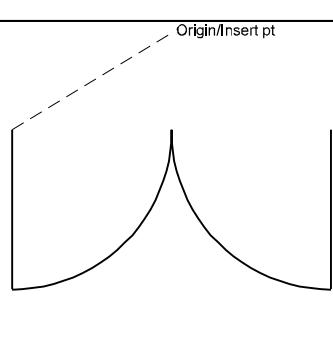
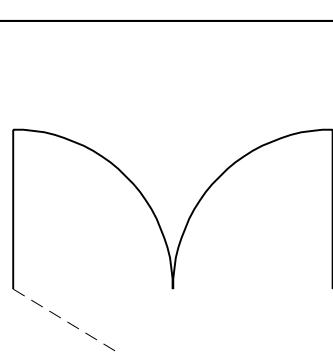
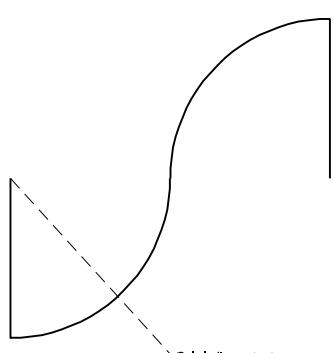
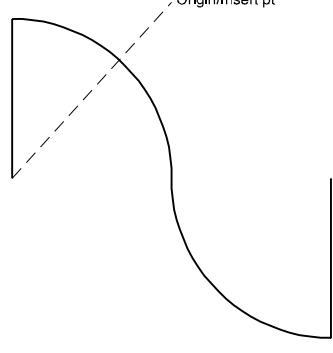
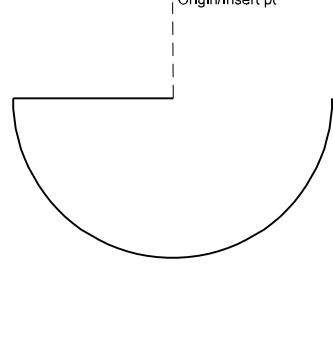
		
<p>Structural:ANBOLT ANCHOR BOLT Element type: Symbol</p>	<p>Structural:CNTLIN CENTERLINE SYMBOL Element type: Symbol</p>	<p>Structural:COLLIN COLUMN LINE GRID INDICATOR Element type: Symbol</p>
		
<p>Structural:JSTBR1 JOIST BAR SINGLE LINE Element type: Symbol</p>	<p>Structural:JSTBR2 JOIST BAR DOUBLE LINE Element type: Symbol</p>	<p>Structural:PLATE PLATE SYMBOL Element type: Symbol</p>

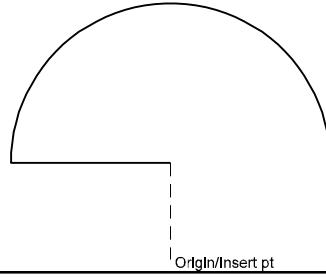
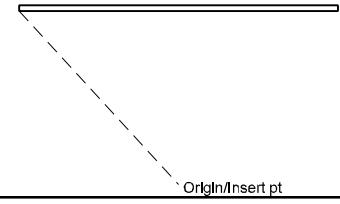
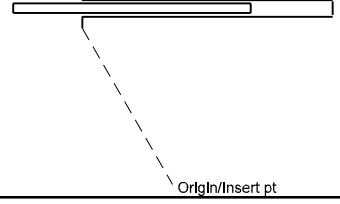
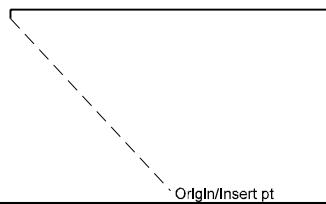
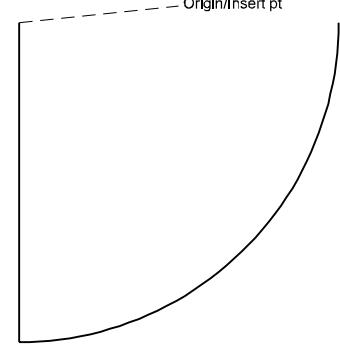
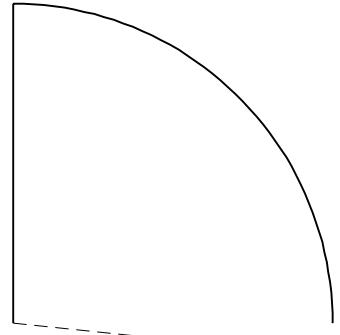
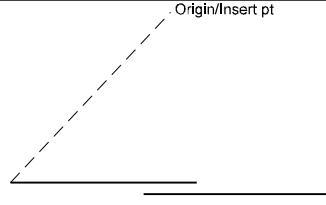
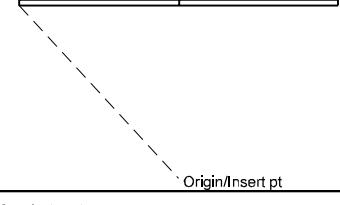
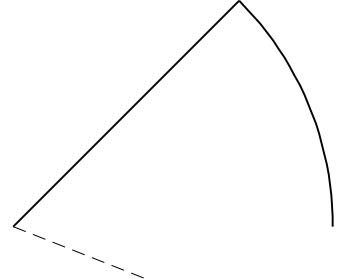
8 Architectural Lines Library

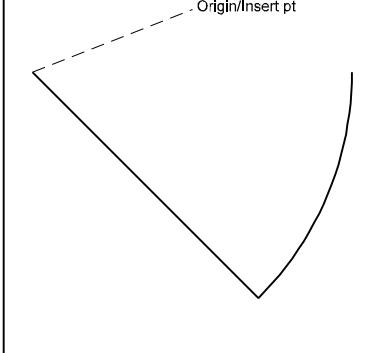
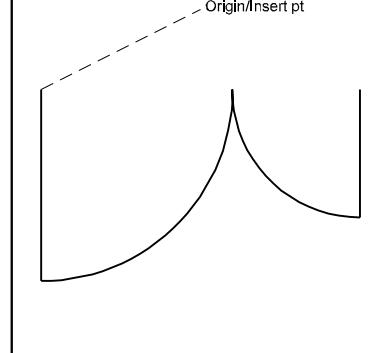
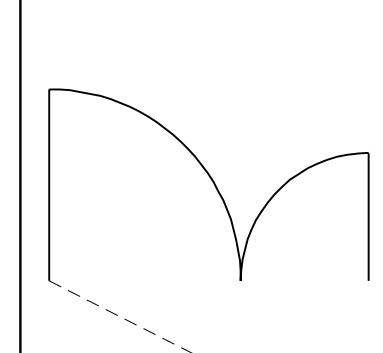
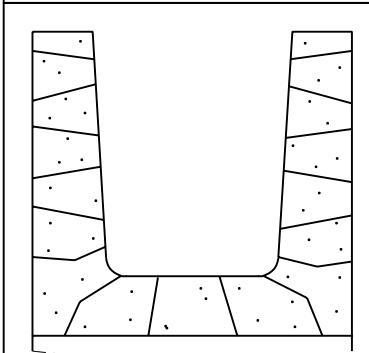
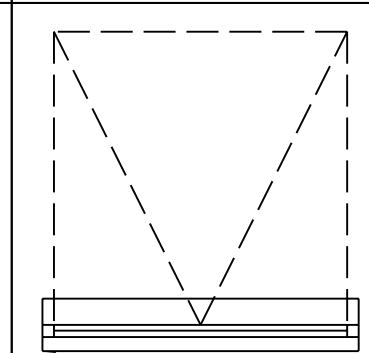
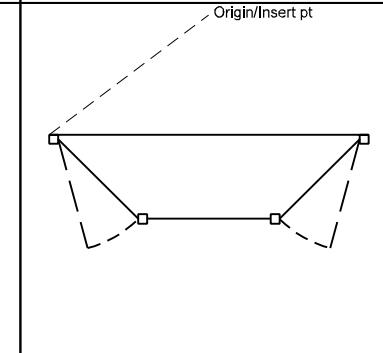
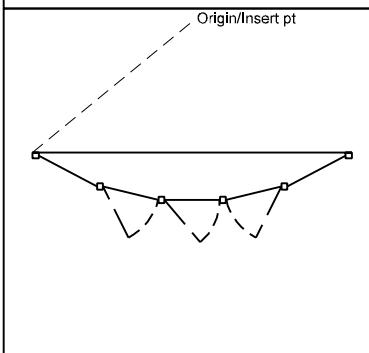
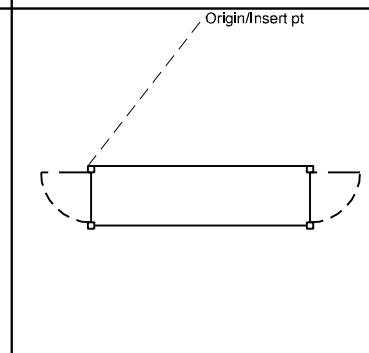
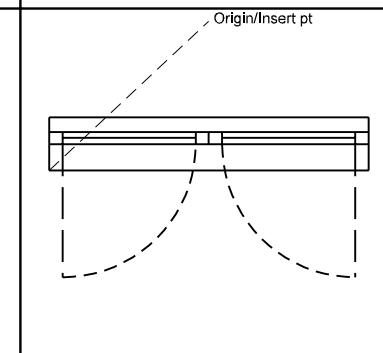
 Architectural: INBATT LOOSE FILL BATT INSULATION Element type: Line	 Architectural: WWWBRC WELDED WIRE FABRIC Element type: Line

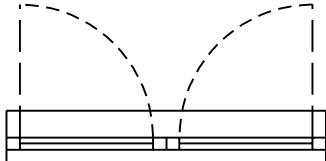
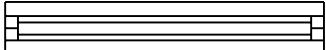
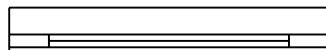
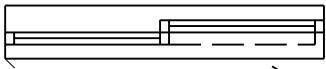
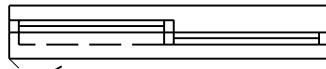
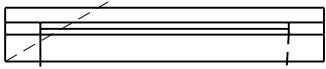
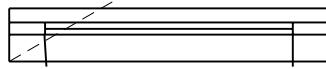
8 Architectural Objects Library

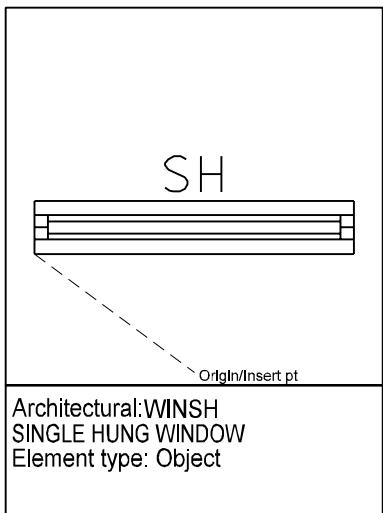
		
Architectural: BRKGL GLAZED BRICK Element type: Object	Architectural: CMU MASONRY UNIT Element type: Object	Architectural: CMUBLK CONC BLOCK 8X8X16 Element type: Object
		
Architectural: CMUCOR CONC BLOCK 8X8X16 COR. Element type: Object	Architectural: CMUEND CONC BLOCK 8X8X16 END Element type: Object	Architectural: CMUGL GLAZED CONCRETE BLOCK Element type: Object
		
Architectural: CMUSTR CONC BLOCK 8X8X16 STR. Element type: Object	Architectural: DOR18L LEFT DOOR 180 DEGREE SWING Element type: Object	Architectural: DOR18R RIGHT DOOR 180 DEGREE SWING Element type: Object

		
Architectural:DORBFL LEFT BIFOLD DOOR Element type: Object	Architectural:DORBFR RIGHT BIFOLD DOOR Element type: Object	Architectural:DORCPV DOOR CENTER PIVOT Element type: Object
		
Architectural:DORCYL CYLINDRICAL DOOR Element type: Object	Architectural:DORDBL LEFT DOUBLE DOOR Element type: Object	Architectural:DORDBR RIGHT DOUBLE DOOR Element type: Object
		
Architectural:DORDEL LEFT DOUBLE EGRESS DOOR Element type: Object	Architectural:DORDER RIGHT DOUBLE EGRESS DOOR Element type: Object	Architectural:DORFSL LEFT SINGLE FULL SWING DOOR Element type: Object

		
Architectural:DORFSR RIGHT SINGLE FULL SWING DOOR Element type: Object	Architectural:DOROVH OVERHEAD DOOR Element type: Object	Architectural:DORPOC DOOR POCKET Element type: Object
		
Architectural:DORRUP ROLL UP DOOR Element type: Object	Architectural:DORSHL LEFT SINGLE HINGED DOOR Element type: Object	Architectural:DORSHR RIGHT SINGLE HINGED DOOR Element type: Object
		
Architectural:DORSLD SLIDING DOOR Element type: Object	Architectural:DORSLS SLIDING SURFACE DOOR Element type: Object	Architectural:DORSPL LEFT SINGLE PIVOT DOOR Element type: Object

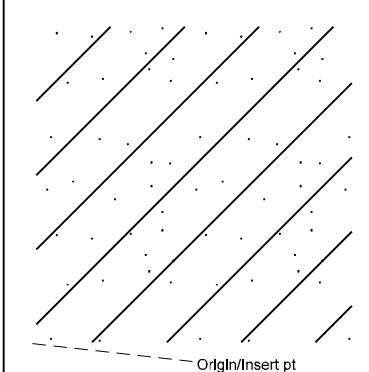
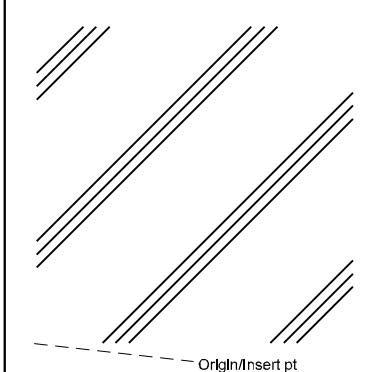
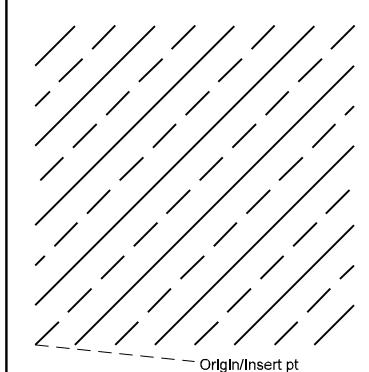
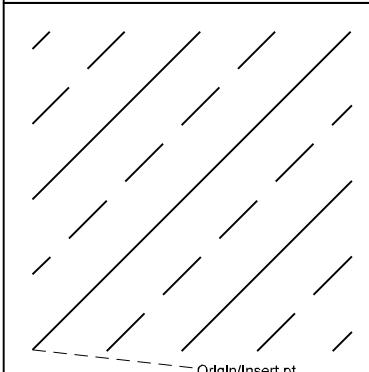
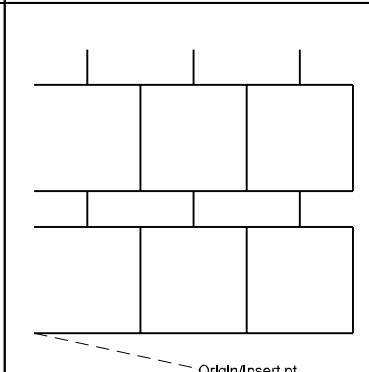
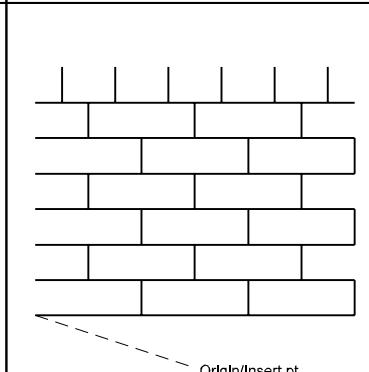
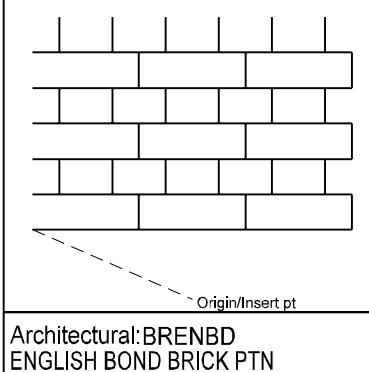
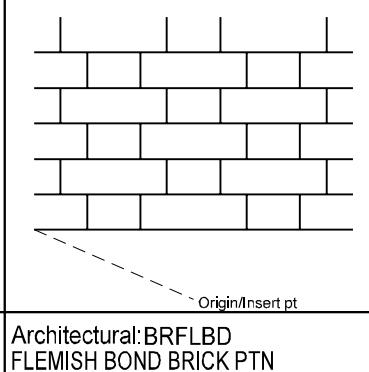
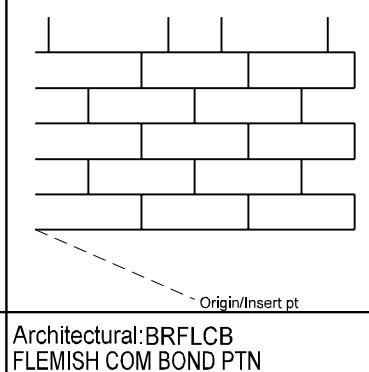
		
Architectural:DORSPR RIGHT SINGLE PIVOT DOOR Element type: Object	Architectural:DORUDL LEFT UNEVEN DOUBLE DOOR Element type: Object	Architectural:DORUDR RIGHT UNEVEN DOUBLE DOOR Element type: Object
		
Architectural:LINTEL CONC BEAM BOND LINTEL Element type: Object	Architectural:WINAWN WINDOW AWNING Element type: Object	Architectural:WINBAY PROJECTED BAY WINDOW Element type: Object
		
Architectural:WINBOW PROJECTED BOW WINDOW Element type: Object	Architectural:WINBOX PROJECTED BOX WINDOW Element type: Object	Architectural:WINDCI WNDW DBLCASEMNT INWRD OPEN Element type: Object

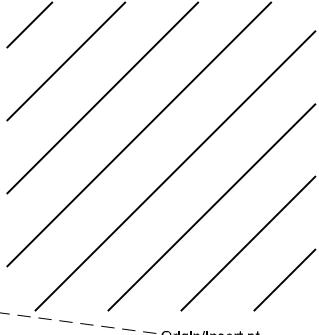
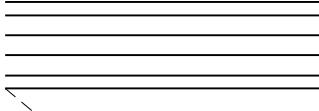
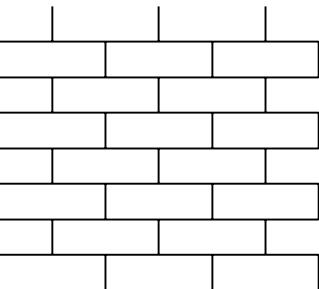
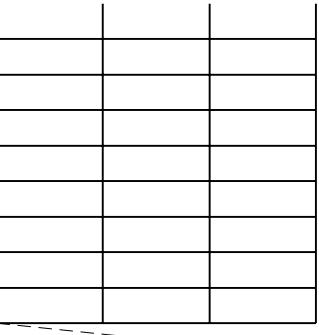
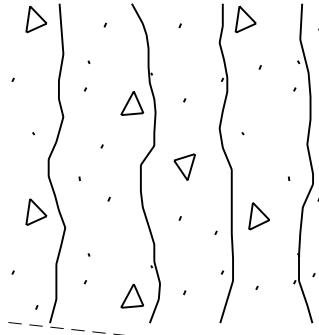
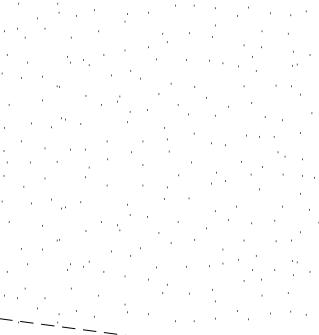
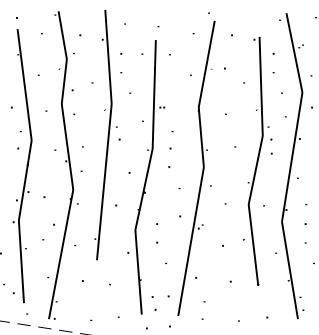
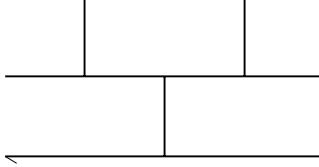
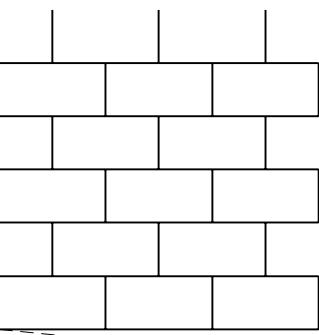
 <p>Origin/Insert pt</p> <p>Architectural:WINDCO WNDW DBLCASEMNT OUTWARD OPE Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINDH DOUBLE HUNG WINDOW Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINFIX FIXED 1 FOOT WINDOW Element type: Object</p>
 <p>Origin/Insert pt</p> <p>Architectural:WINJAL JALOUSIE WINDOW Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINOSL SLDNG WNDW LFT OPRTNG SASH Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINOSR SLDNG WNDW RGH T OPRTNG SASH Element type: Object</p>
 <p>Origin/Insert pt</p> <p>Architectural:WINPIV PIVOT WINDOW Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINSCL WNDWSNGLCASEMNTLEFTJAMBHING Element type: Object</p>	 <p>Origin/Insert pt</p> <p>Architectural:WINSCR WNDWSNGLCASEMNRGHTJAMBHING Element type: Object</p>

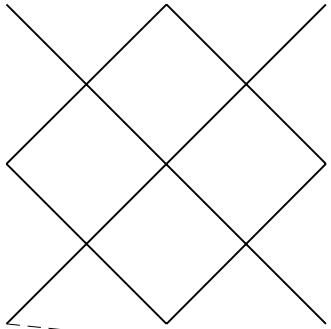
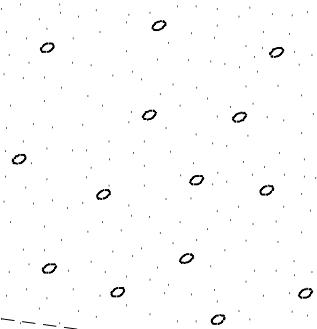
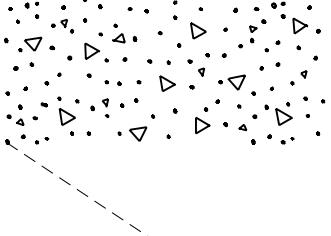
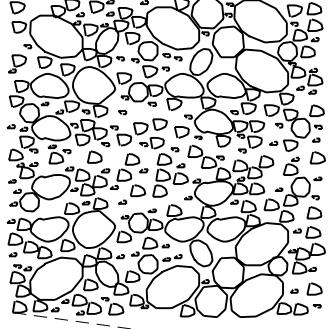
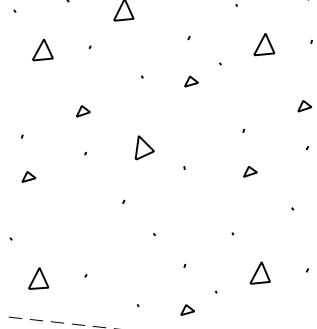
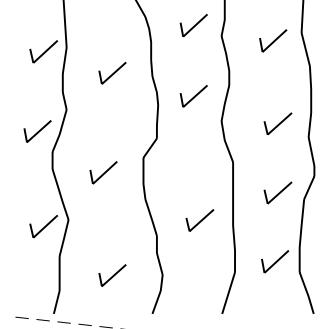
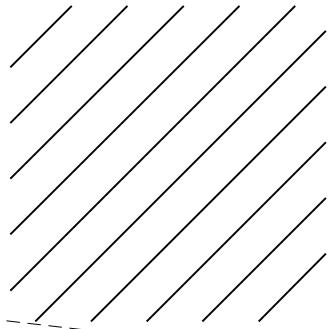
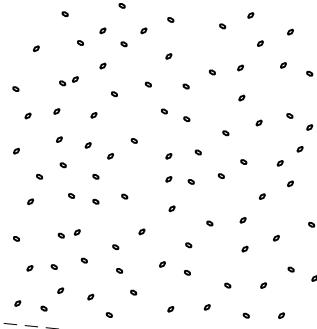
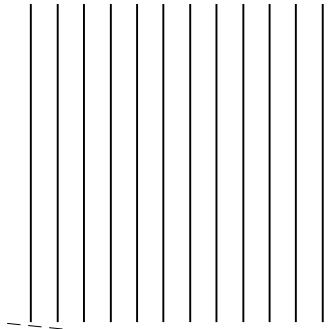


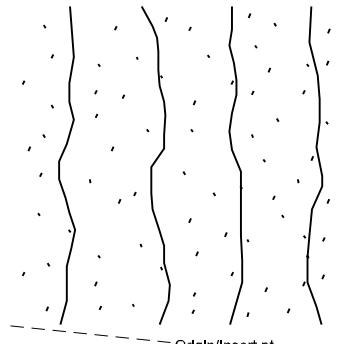
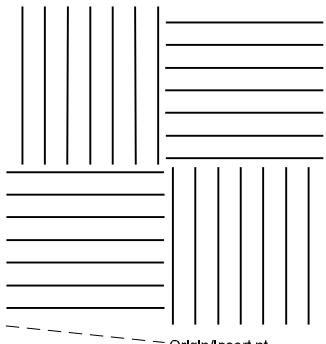
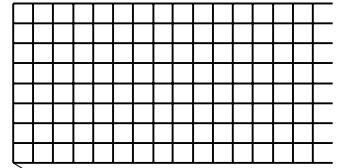
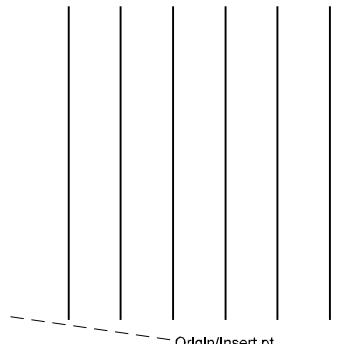
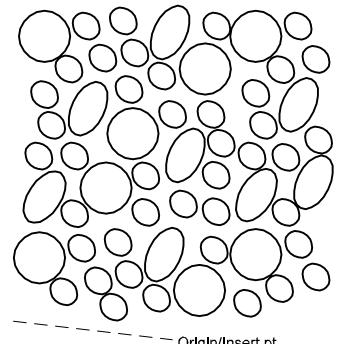
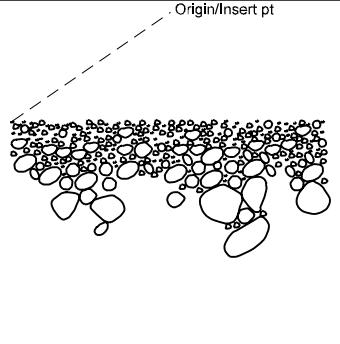
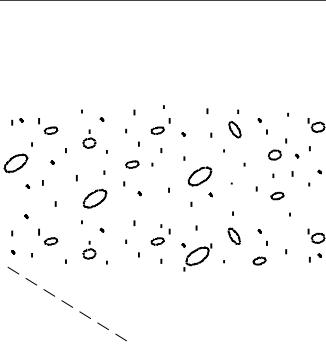
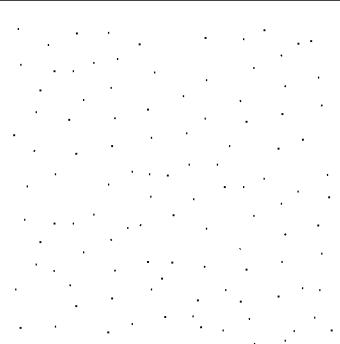
Architectural:W1NSH
SINGLE HUNG WINDOW
Element type: Object

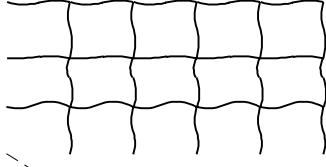
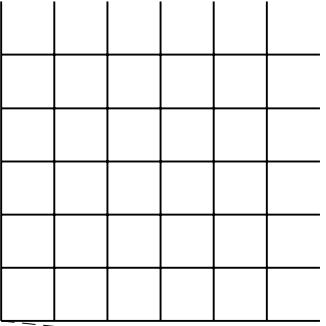
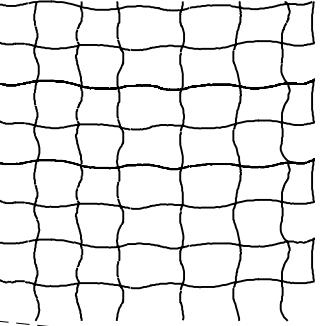
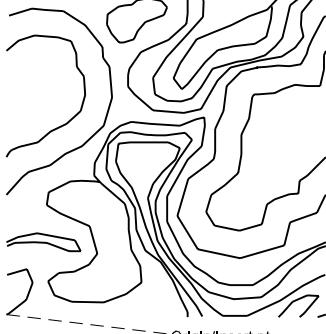
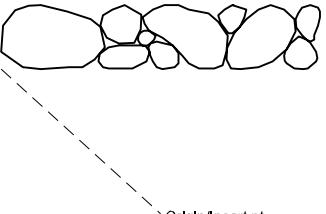
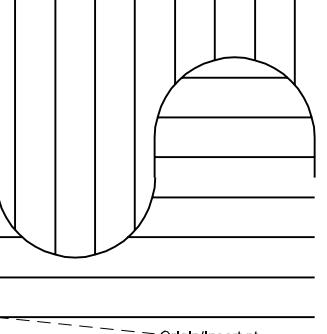
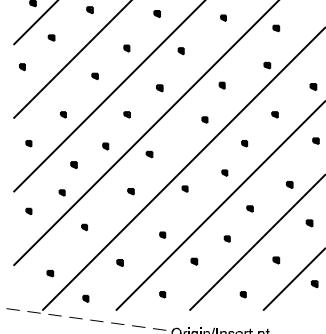
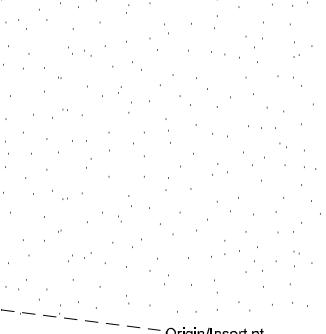
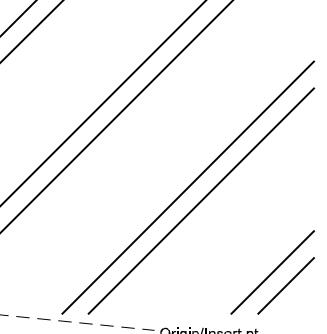
8 Architectural Patterns Library

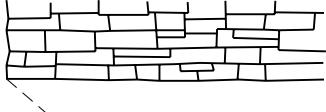
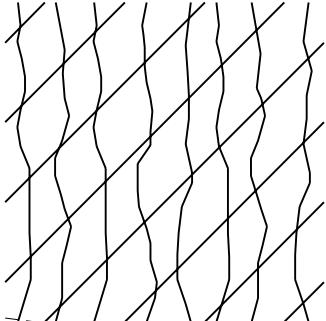
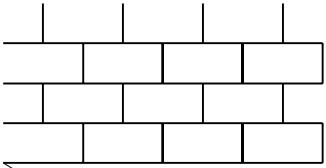
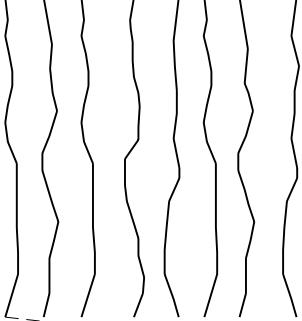
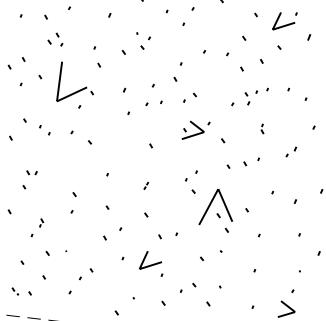
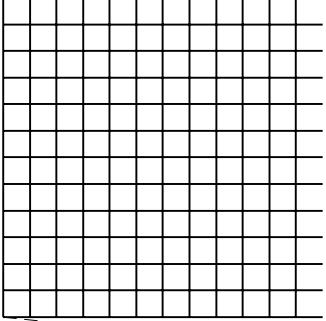
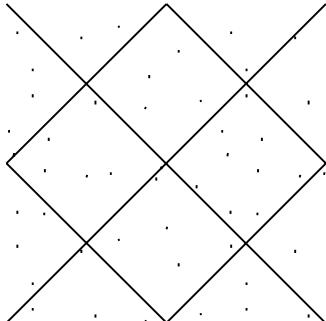
		
Architectural: ADOBE MSNRY ADOBE RAMMED EARTH PTN Element type: Pattern	Architectural: ALUMIN ALUMINUM PATTERN Element type: Pattern	Architectural: ASHLER STONE ASHLER PATTERN Element type: Pattern
		
Architectural: BRASS BRONZE BRASS PATTERN Element type: Pattern	Architectural: BRBLCO COURSED BRICK BLK PTN Element type: Pattern	Architectural: BRCOBD COMMON BOND BRICK PTN Element type: Pattern
		
Architectural: BRENBD ENGLISH BOND BRICK PTN Element type: Pattern	Architectural: BRFLBD FLEMISH BOND BRICK PTN Element type: Pattern	Architectural: BRFLCB FLEMISH COM BOND PTN Element type: Pattern

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:BRKCF COMMON FACE BRICK PTN Element type: Pattern	Architectural:BRKELE BRICK ELEVATION PTN Element type: Pattern	Architectural:BRRNBD BRICK RUNNING BOND PTN Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:BRSTBD BRICK STACK BOND PATTERN Element type: Pattern	Architectural:CCBSS CAST CONC BLK SM SCALE PTN Element type: Pattern	Architectural:CCELEV CONC CEMENT ELEV PTN Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:CDTOP CEMENTITIOUSDECK TOPPINGPTN Element type: Pattern	Architectural:CMUBP CMU BLOCK PTN Element type: Pattern	Architectural:CMUELB ELEVATION BLOCK PTN Element type: Pattern

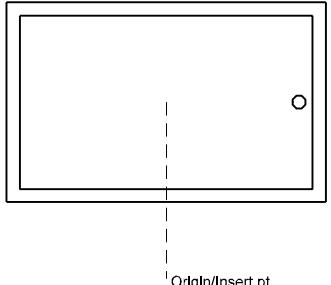
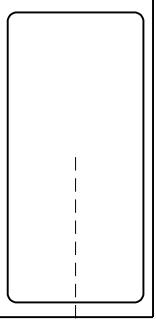
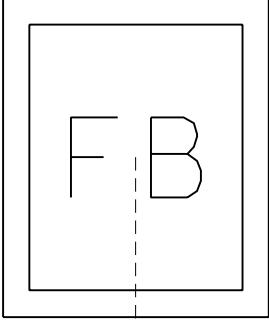
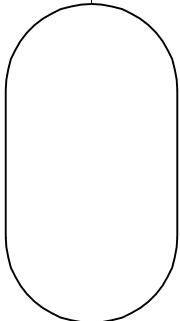
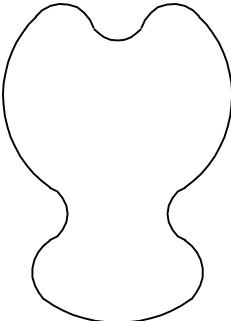
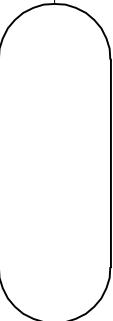
		
Architectural:CONBLK CONCRETE BLOCK PATTERN Element type: Pattern	Architectural:CONCCN CONCRETE CINDER Element type: Pattern	Architectural:CONCLW CONCRETE LIGHT WEIGHT Element type: Pattern
		
Architectural:CONCPR PRECAST CASTIN PLACECONCPTN Element type: Pattern	Architectural:CONCST CONCRETE STONE Element type: Pattern	Architectural:CONPBS PUMICE BLK CONC S SCALE PTN Element type: Pattern
		
Architectural:CSTIRN CAST IRON PATTERN Element type: Pattern	Architectural:CSTSTN CAST STONE PATTERN Element type: Pattern	Architectural:CTILSS CERAMIC TILE SM SCALE Element type: Pattern

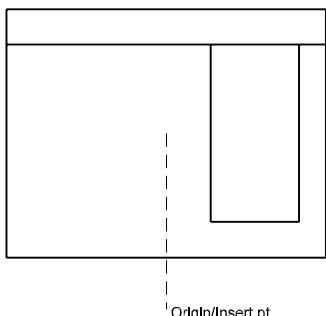
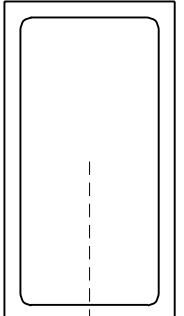
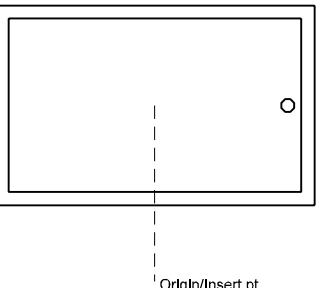
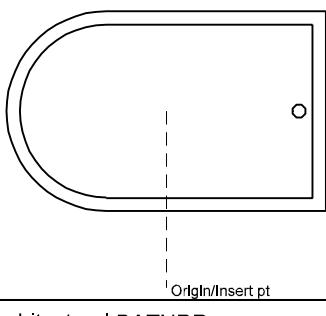
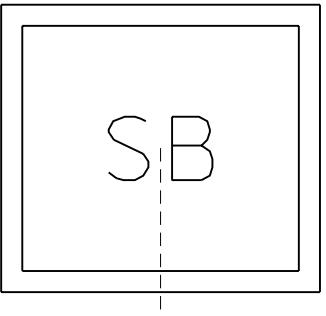
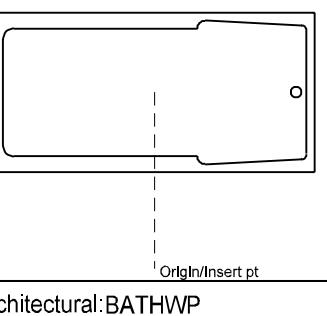
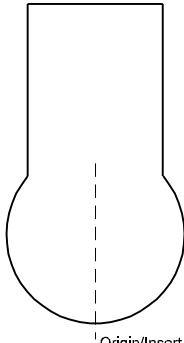
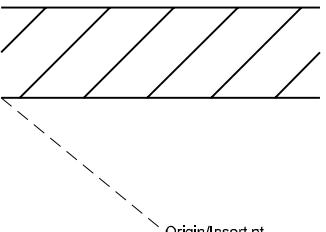
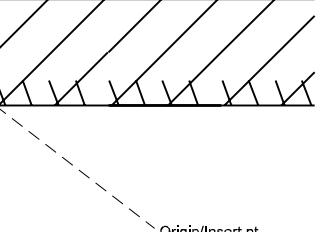
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:CUTSTN CUT STONE PATTERN Element type: Pattern	Architectural:EARTH COMPACTD FILL EARTHWRK PTN Element type: Pattern	Architectural:FIBFSF FIBROUS FIRE SAFING PTN Element type: Pattern
 Origin/Insert pt		 Origin/Insert pt
Architectural:GLASS STRUCTURAL GLASS PTN Element type: Pattern	Architectural:GROUT GROUT Element type: Pattern	Architectural:GRVCRE CRUSHED ROCK EARTH GRVL PTN Element type: Pattern
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:GRVPFE POROUSFILLGRAVLEARTHWRKPTN Element type: Pattern	Architectural:GRVSCL SAND CLAY GRAVEL PATTERN Element type: Pattern	Architectural:GYPPPE GYPSUM PLASTERPLAN ELEV PTN Element type: Pattern

		
Architectural:INSQLT LRGSCALE INSULATNQUILTSPTN Element type: Pattern	Architectural:INSRIG RIGID INSULATION PATTERN Element type: Pattern	Architectural:INSSCM SOLIDCORKMAGNESIA INSULPTN Element type: Pattern
		
Architectural:MARBL2 MARBLE STONE PLAN VIEW Element type: Pattern	Architectural:RIPRAP RIPRAP PATTERN Element type: Pattern	Architectural:ROCK ROCK EARTHWORK PATTERN Element type: Pattern
		
Architectural:RUBBLE STONE RUBBLE PATTERN Element type: Pattern	Architectural:SAND SAND PATTERN Element type: Pattern	Architectural:STEEL STEEL OTHER METALS PATTERN Element type: Pattern

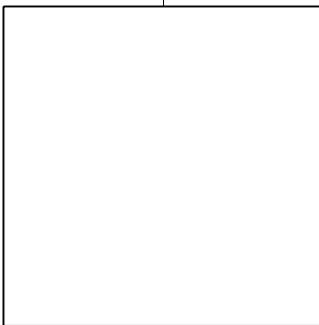
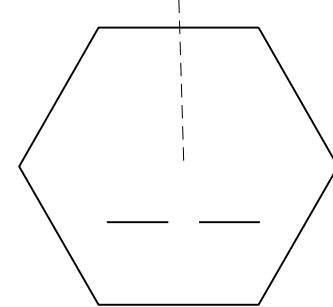
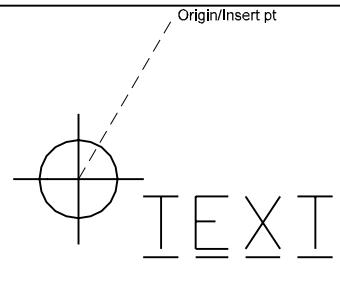
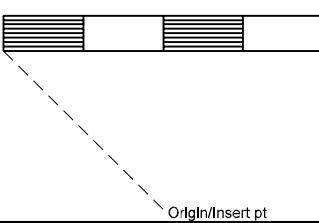
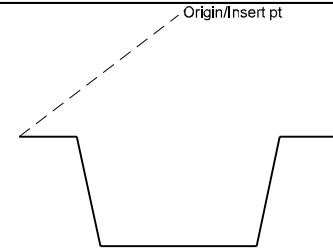
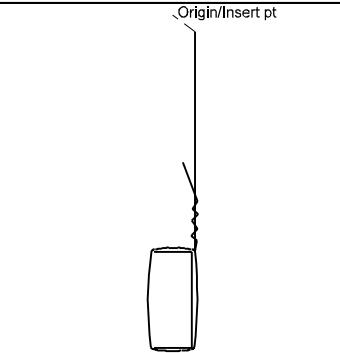
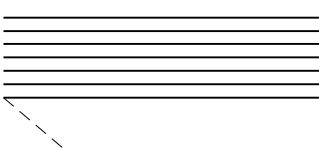
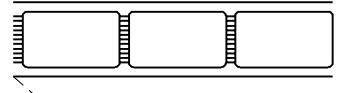
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Architectural: STNSQR SQUARED STONE PATTERN Element type: Pattern</p>	<p>Architectural: TCBCSS TERACOTA SMSCALE BRICKCOTA Element type: Pattern</p>	<p>Architectural: TCELEV TERRA COTTA ELEVATION PTN Element type: Pattern</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Architectural: TCUSS TERACOTA SMSCALE UNGLZDPTN Element type: Pattern</p>	<p>Architectural: TERRZO TERRAZZO PATTERN Element type: Pattern</p>	<p>Architectural: TILCER CERAMIC TILE ELEVATION PTN Element type: Pattern</p>
 <p>Origin/Insert pt</p>		
<p>Architectural: TILESF STRUCTURAL FACING TILE PTN Element type: Pattern</p>		

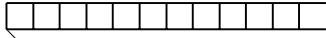
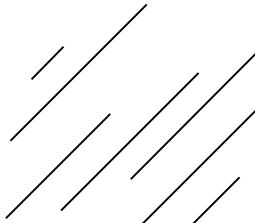
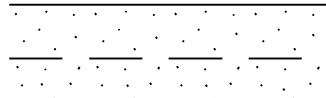
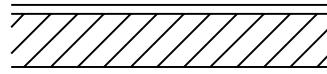
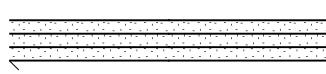
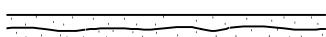
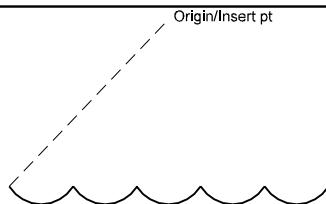
8 Architectural Symbols Library

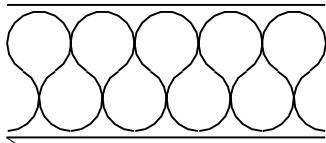
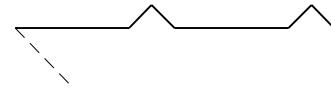
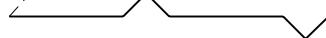
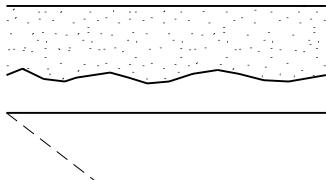
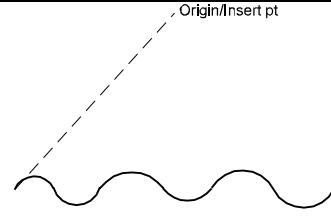
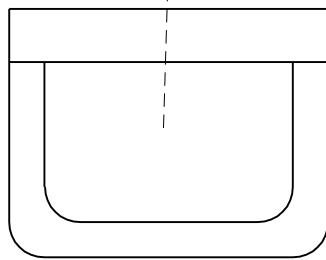
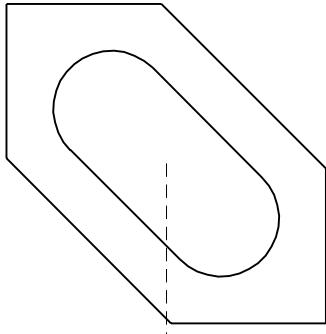
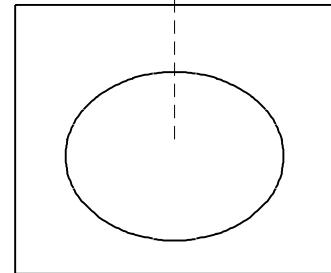
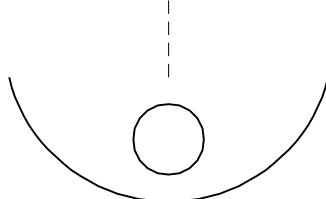
		
Architectural:ARCPBW ARCHCTRL PARTICLEBRD WDWK Element type: Symbol	Architectural:ASBDLS LARGE SCALE ASBESTOS BOARD Element type: Symbol	Architectural:ASBDSS SMALL SCALE ASBESTOS BOARD Element type: Symbol
		
Architectural:BATHCO CORNER BATH Element type: Symbol	Architectural:BATHEM EMERGENCY BATH Element type: Symbol	Architectural:BATHFT FOOT BATH Element type: Symbol
		
Architectural:BATHHA HYDROTHERAPY ARM BATH Element type: Symbol	Architectural:BATHHH HYDROTHERAPY HUBBARD BATH Element type: Symbol	Architectural:BATHHL HYDROTHERAPY LEG BATH Element type: Symbol

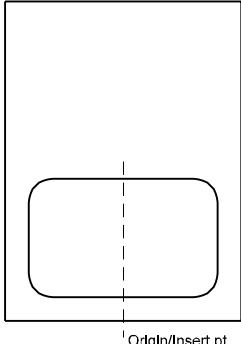
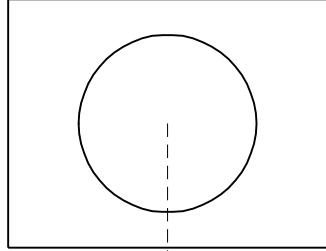
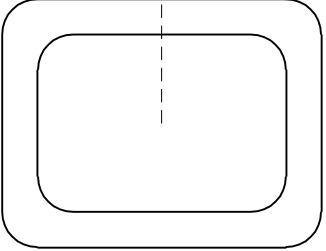
		
Architectural:BATHIF INFANT BATH Element type: Symbol	Architectural:BATHIN INSTITUTIONAL BATH Element type: Symbol	Architectural:BATHRC RECESSED BATH Element type: Symbol
		
Architectural:BATHRR ROLL RIM BATH Element type: Symbol	Architectural:BATHSZ SITZ BATH Element type: Symbol	Architectural:BATHWP WHIRLPOOL BATH Element type: Symbol
		
Architectural:BIDET WATERCLOSET BIDET Element type: Symbol	Architectural:BRFACC BRICK FACE ON COMMON Element type: Symbol	Architectural:BRFIRE FIRE BRICK Element type: Symbol

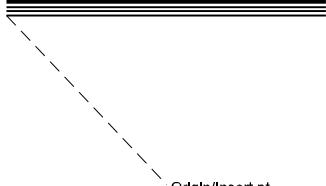
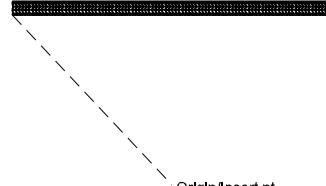
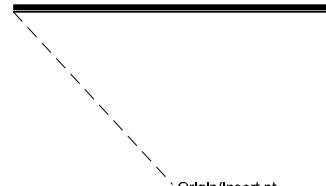
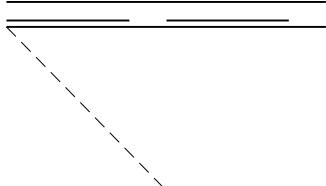
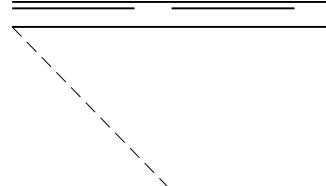
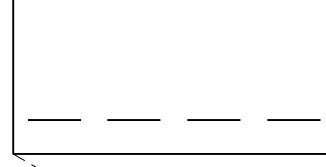
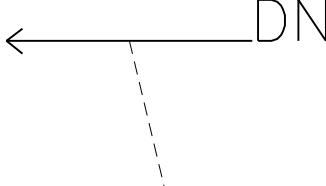
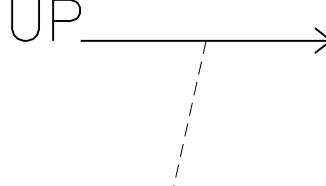
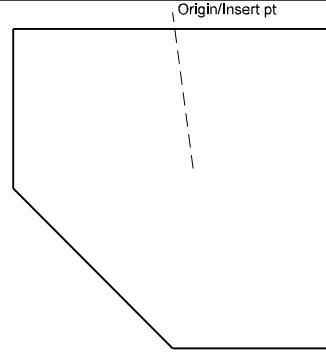
Architectural:BSSFLG BLUESTN SLT SOAPSTN FLAGING Element type: Symbol	Architectural:CANWCT CAN WASHER CABINET TYPE Element type: Symbol	Architectural:CANWDT CAN WASHER DISH TYPE Element type: Symbol
Architectural:CARPET CARPET AND PAD Element type: Symbol	Architectural:CPLANK CONCRETE PLANK Element type: Symbol	Architectural:DFPROJ DRINK FOUNTAN PROJECTNG TYP Element type: Symbol
Architectural:DFRECS DRINK FOUNTAIN RECESSED TYP Element type: Symbol	Architectural:DFSREC DRINK FOUNTN SEMIRECESSD TYP Element type: Symbol	Architectural:DOORID DOOR OPENING IDENTIFIER Element type: Symbol

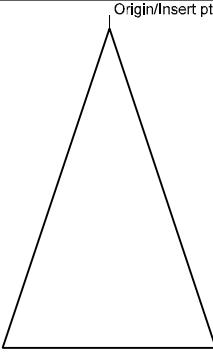
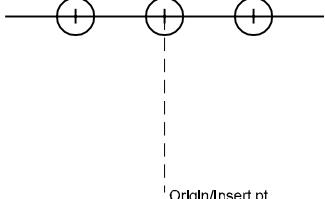
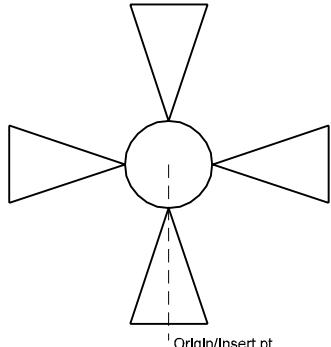
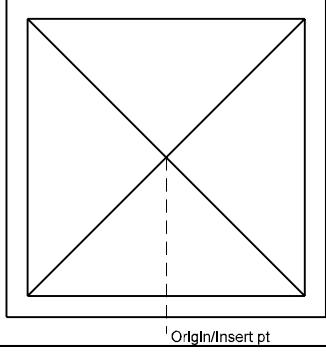
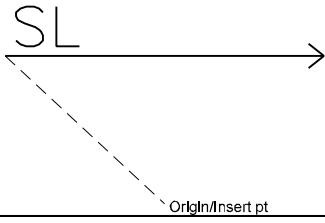
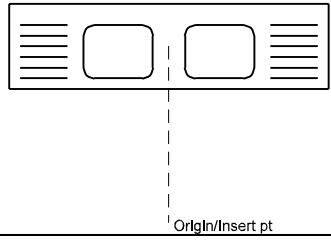
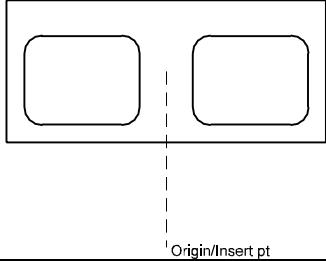
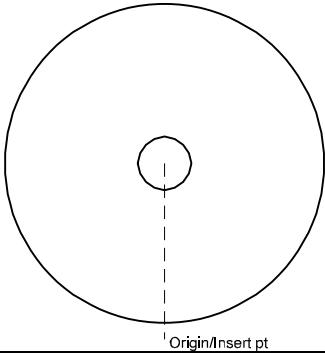
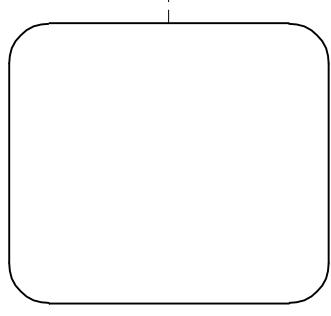
		
Architectural:DSHWSH COMMERCIAL DISHWASHER Element type: Symbol	Architectural:EQPMID EQUIPMENT IDENTIFIER Element type: Symbol	Architectural:FASTEN FASTENER Element type: Symbol
		
Architectural:FLRRPL FLOORINGRESILIENT PLSTC LAM Element type: Symbol	Architectural:FURCHH FURRING CHANNEL HAT Element type: Symbol	Architectural:FURCHN FURRING CHANNEL Element type: Symbol
		
Architectural:GLASLS LARGE SCALE GLASS Element type: Symbol	Architectural:GLASSS SMALL SCALE GLASS Element type: Symbol	Architectural:GLBLLS GLASS BLOCK LARGE SCALE Element type: Symbol

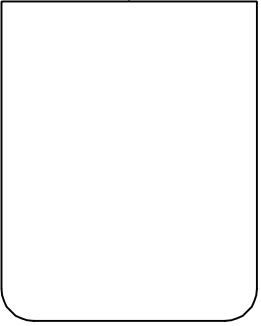
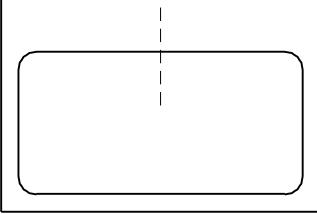
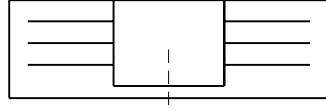
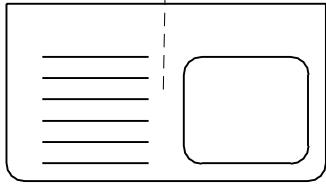
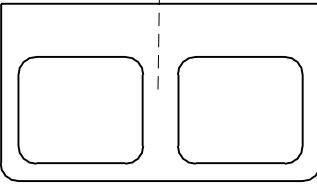
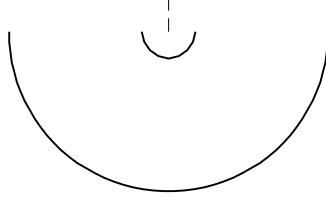
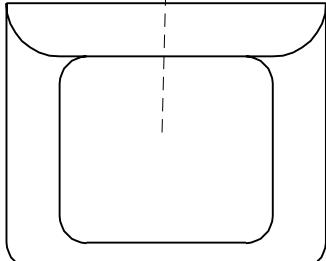
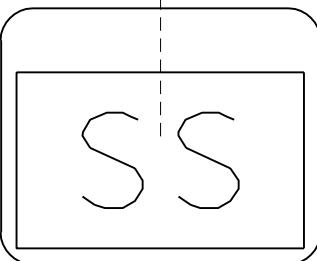
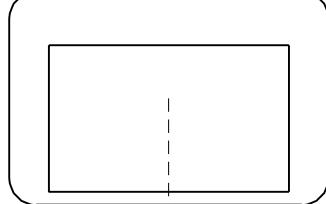
		
Architectural:GLBLSS GLASS BLOCK SMALL SCALE Element type: Symbol	Architectural:GLELEV GLASS ELEVATION Element type: Symbol	Architectural:GPLANK GYPSUM PLANK Element type: Symbol
		
Architectural:GYPBLK GYPSUM BLOCK TILE Element type: Symbol	Architectural:GYPPOM GYPSUM PLASTER ON MASONRY Element type: Symbol	Architectural:GYPPP GYPSUM PLASTER PARTICLE BR Element type: Symbol
		
Architectural:GYPSPP GYPSUMSOLIDPLASTERPARTITION Element type: Symbol	Architectural:GYPWBD GYPSUM WALLBOARD FINISHES Element type: Symbol	Architectural:INFBSS SMSCALE FLXBL BLANKET INSUL Element type: Symbol

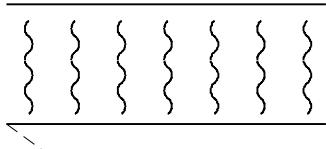
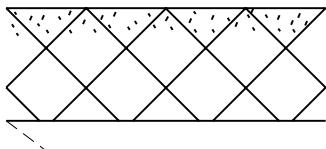
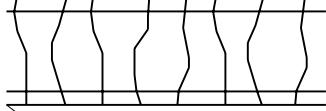
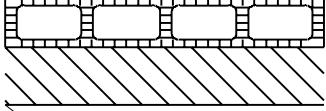
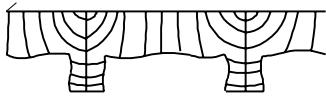
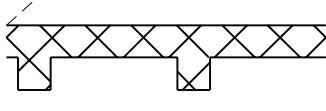
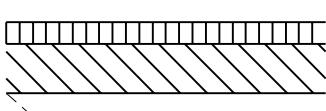
		
Architectural:INLFLS LRGSCALE LOOSE FILL INSULAT Element type: Symbol	Architectural:INS1RM INSUL REFLCTVE MTL ON 1 SDE Element type: Symbol	Architectural:INS2RM INSUL RFLCTVCRTN 2SDS SMSC Element type: Symbol
		
Architectural:INSFOM SPRAY FOAM INSULATION Element type: Symbol	Architectural:INSTND INSUL TYPE NOT DETER LRGSC Element type: Symbol	Architectural:LAVBCK BACK LAVATORY Element type: Symbol
		
Architectural:LAVCOR CORNER LAVATORY Element type: Symbol	Architectural:LAVCOU LAVATORY IN COUNTER Element type: Symbol	Architectural:LAVDNT DENTAL LAVATORY Element type: Symbol

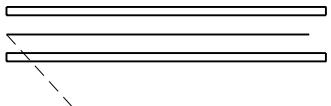
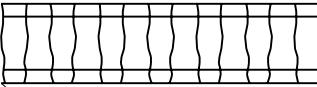
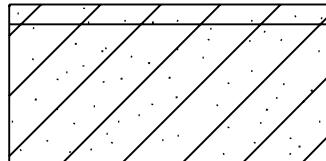
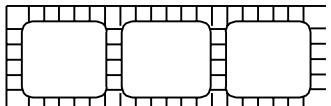
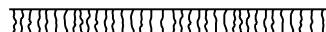
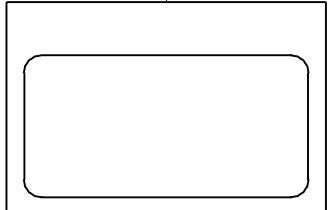
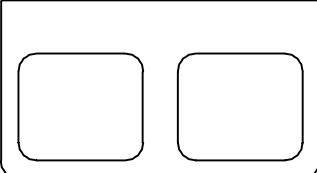
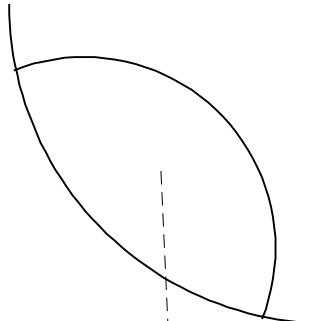
		
Architectural:LAVHND HANDICAPPED LAVATORY Element type: Symbol	Architectural:LAVMDM MEDICAL MANICURE LAVATORY Element type: Symbol	Architectural:LAVSLB SLAB TYPE LAVATORY Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:MTLLPL METAL LATH AND PLASTER Element type: Symbol	Architectural:MTLSHT METALSHEET ALLMETALSSMSCALE Element type: Symbol	Architectural:ORISTB ORIENTED STRAND BOARD Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Architectural:PARTBD PARTICLEBOARD Element type: Symbol	Architectural:PLASTC PLASTIC FINISHES Element type: Symbol	Architectural:PLPLLS LRGSCALE PLASTIC ON PLYWOOD Element type: Symbol

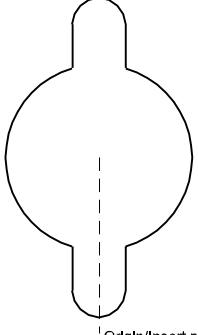
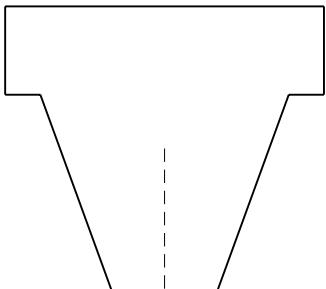
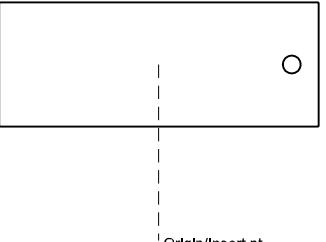
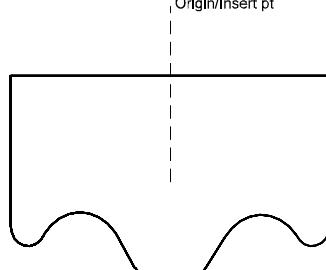
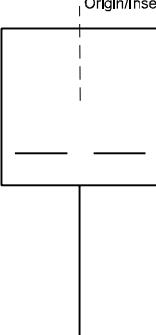
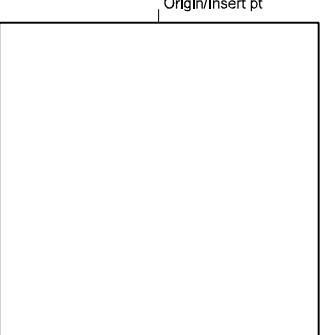
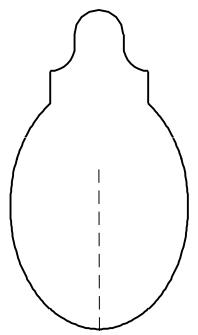
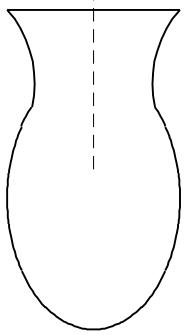
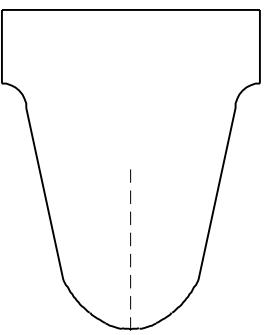
		
Architectural:PLPLSS SMSCALE PLASTIC ON PLYWOOD Element type: Symbol	Architectural:PLYWLS LARGE SCALE PLYWOOD Element type: Symbol	Architectural:PLYWSS SMALL SCALE PLYWOOD Element type: Symbol
		
Architectural:RBIIILS RGD BRD INTRR INSUL LRGSC Element type: Symbol	Architectural:RBISLS INSUL RGDBRD ASSHTHNG LRGSC Element type: Symbol	Architectural:ROOMID ROOM IDENTIFIER Element type: Symbol
		
Architectural:SDIRLD STAIR DIRECTION LINE DOWN Element type: Symbol	Architectural:SDIRLU STAIR DIRECTION LINE UP Element type: Symbol	Architectural:SHWRCO CORNER SHOWER Element type: Symbol

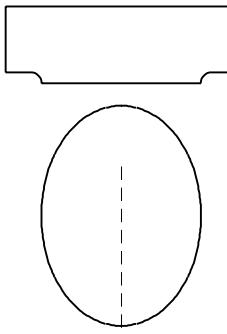
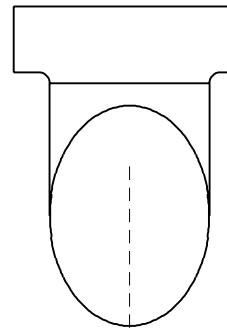
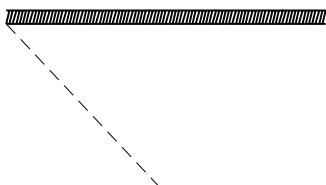
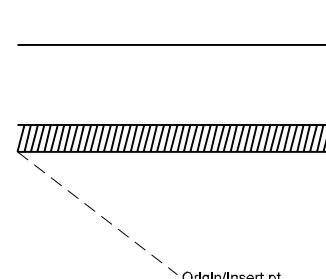
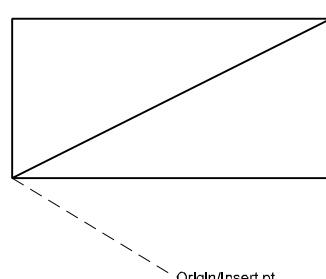
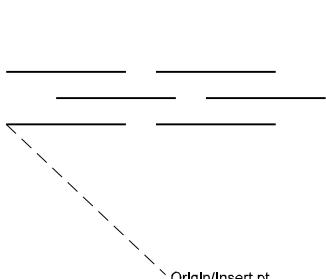
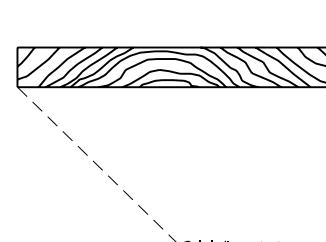
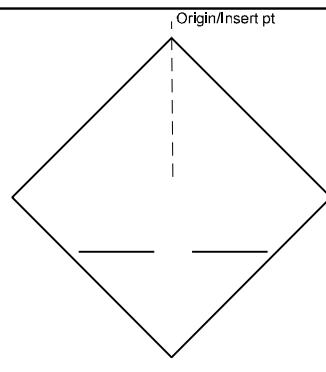
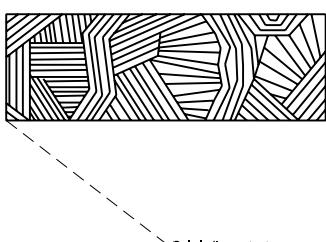
		
Architectural: SHWRHD SHOWER HEAD Element type: Symbol	Architectural: SHWROG SHOWER OVERHEAD GANG Element type: Symbol	Architectural: SHWRPG SHOWER PEDESTAL GANG Element type: Symbol
		
Architectural: SHWRST SHOWER STALL Element type: Symbol	Architectural: SLOPE DIRECTION OF LINE SLOPE Element type: Symbol	Architectural: SNK2BD DBLE SINK W DRAINBOARDS Element type: Symbol
		
Architectural: SNK2CT SINK TWO COMPARTMENT TYPE Element type: Symbol	Architectural: SNKCWT CIRCULAR WASH TYPE SINK Element type: Symbol	Architectural: SNKDSP SINK DISPOSER Element type: Symbol

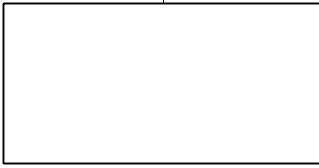
		
Architectural: SNKFRC FLUSHING RIM CLINICAL SINK Element type: Symbol	Architectural: SNKGEN GENERAL SINK Element type: Symbol	Architectural: SNKKLR KITCH SNK WL AND R DRAIN BD Element type: Symbol
		
Architectural: SNKLDB SINK W LEFT DRAINBOARD Element type: Symbol	Architectural: SNKLTR SINK LAUNDRY TRAY Element type: Symbol	Architectural: SNKSCW SEMICIRCULAR WASH SINK Element type: Symbol
		
Architectural: SNKSLP SLOP TYPE SINK Element type: Symbol	Architectural: SNKSRV SERVICE SINK Element type: Symbol	Architectural: SNKSSC SURGEON SCRUB SINK Element type: Symbol

		
Architectural:STLCSS STRUCTURAL CLAY TILE SM SCL Element type: Symbol	Architectural:SUSPNT SUSPENSION TEE Element type: Symbol	Architectural:TC1FLS TERACOTA GLZD1FACE LRGSCALE Element type: Symbol
		
Architectural:TC2FSS TERACOTA GLZD2FACES SMSCALE Element type: Symbol	Architectural:TCHOLW HOLLOW TERRA COTTA Element type: Symbol	Architectural:TCCLS LARGE SCALE TERRA COTTA Element type: Symbol
		
Architectural:TCQLS TERA COTA QUARRY LRGSCALE Element type: Symbol	Architectural:TCUGLS TERACOTA UNGLAZED LRGSCALE Element type: Symbol	Architectural:TCVENR VENEER TERRA COTTA Element type: Symbol

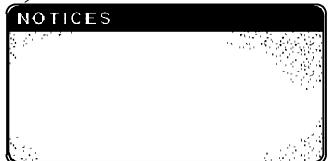
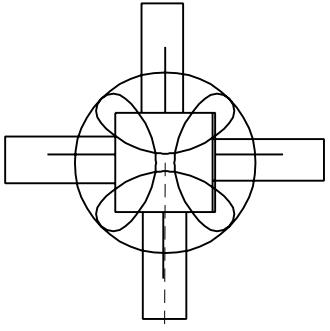
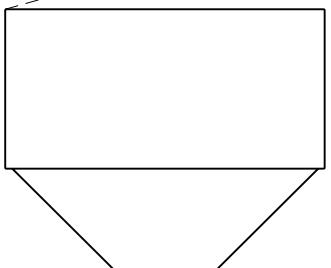
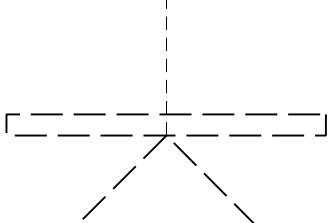
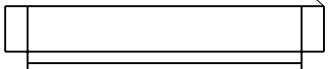
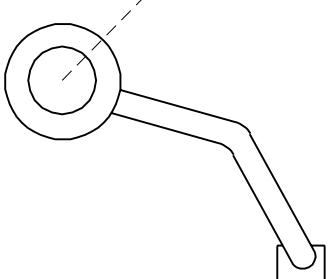
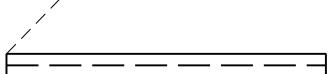
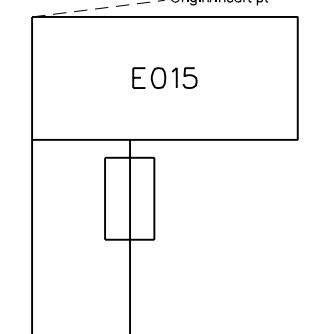
		
Architectural:THRSHD THRESHOLD Element type: Symbol	Architectural:TILFSS SMALL SCALE TILE FACING Element type: Symbol	Architectural:TILGSC GLZESTRUCTURAL CLAY TILE MAS Element type: Symbol
		
Architectural:TILSFU TILE STRUCTURAL FLOOR UNITS Element type: Symbol	Architectural:TLACOU ACOUSTICAL TILE FINISH Element type: Symbol	Architectural:TLCRLS CERAMIC TILE FINISH LRGSCALE Element type: Symbol
		
Architectural:TRAY1L SINGLE LAUNDRY TRAY Element type: Symbol	Architectural:TRAY2L DOUBLE LAUNDRY TRAYS Element type: Symbol	Architectural:URNLCO CORNER TYPE URINAL Element type: Symbol

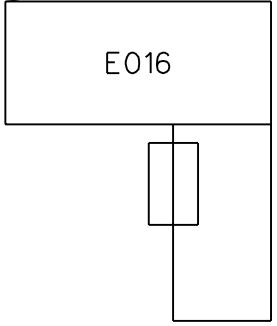
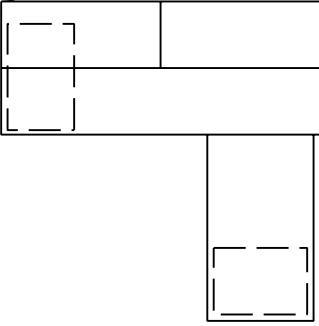
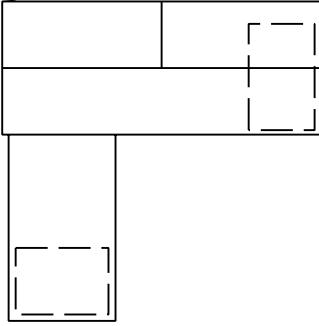
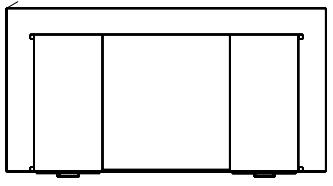
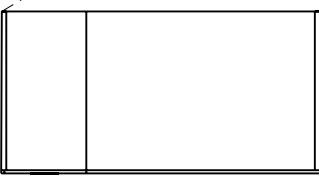
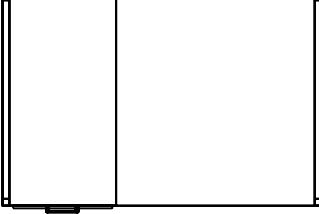
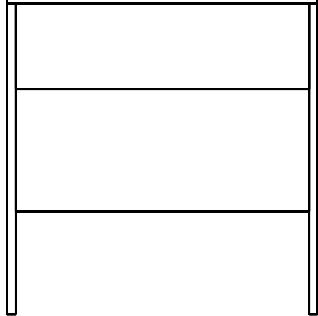
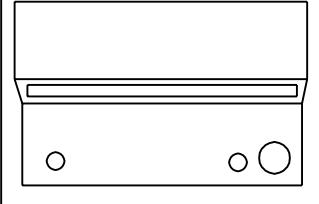
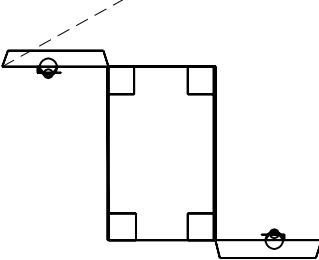
		
Architectural:URNLPD PEDESTAL TYPE URINAL Element type: Symbol	Architectural:URNLST URINAL STALL Element type: Symbol	Architectural:URNLTR TROUGH TYPE URINAL Element type: Symbol
		
Architectural:URNLWH WALL HUNG URINAL Element type: Symbol	Architectural:WALLID WALL TYPE IDENTIFIER Element type: Symbol	Architectural:WCELWH ELEC WALLHUNG WATER COOLER Element type: Symbol
		
Architectural:WCFVFO F.V. FLR OUTLET WATERCLOSET Element type: Symbol	Architectural:WCFVWH F.V. WALL HUNG WATERCLOSET Element type: Symbol	Architectural:WCITNK INTEGRAL TANK WATERCLOSET Element type: Symbol

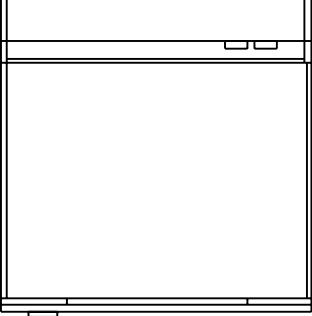
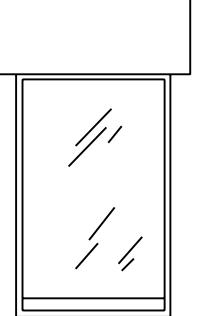
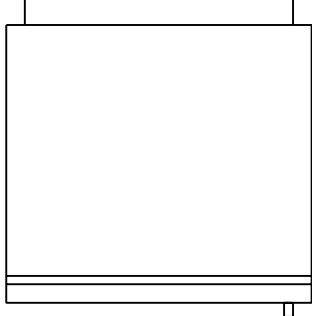
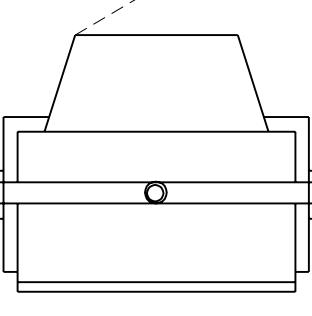
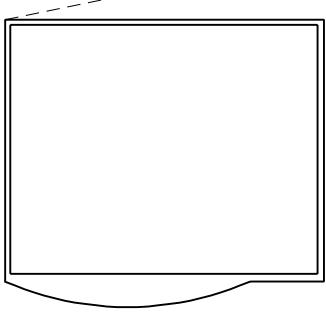
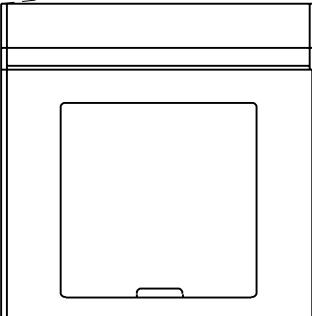
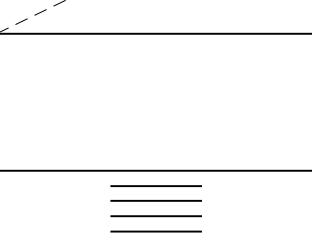
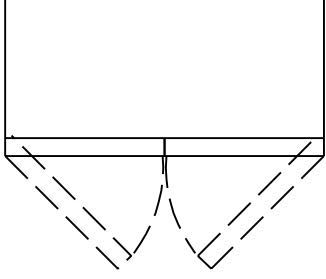
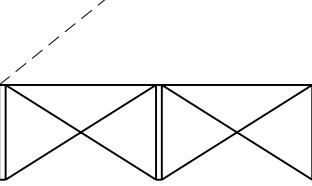
		
Architectural:WCTANK TANK TYPE WATERCLOSET Element type: Symbol	Architectural:WCWHTN WALL HUNG TANK WATERCLOSET Element type: Symbol	Architectural:WDFLBD WOOD FLOOR BOARD Element type: Symbol
		
Architectural:WDFNOS WOOD FINISH ON STUDS Element type: Symbol	Architectural:WDFRAM CONTINUOUS WOOD FRAMING Element type: Symbol	Architectural:WDSHSD WOOD SHINGLES SIDING Element type: Symbol
		
Architectural:WFINSH WOOD FINISH Element type: Symbol	Architectural:WINID WINDOW IDENTIFIER Element type: Symbol	Architectural:WOODHB HARDBOARD WOOD Element type: Symbol

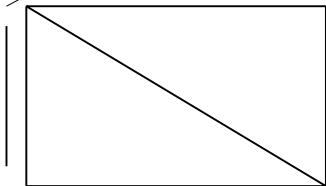
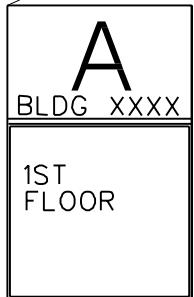
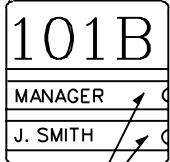
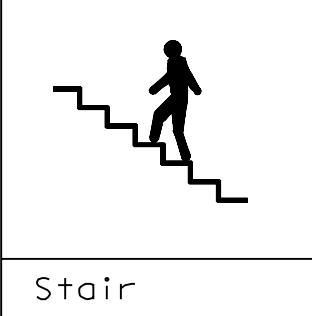
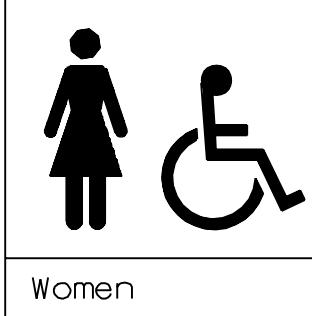
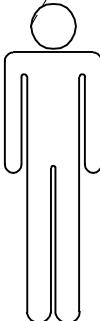
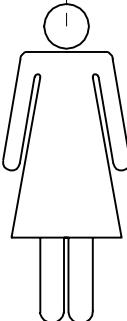
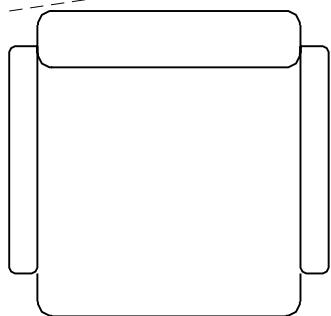
	 <p>Origin/Insert pt</p>
Architectural:WSHRBP BEDPAN WASHER Element type: Symbol	Architectural:WTRPFF WATERPROOFING FELT FLASHING Element type: Symbol

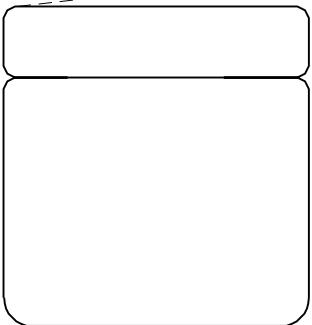
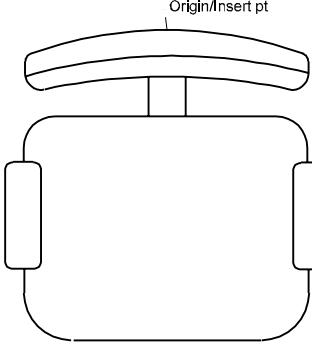
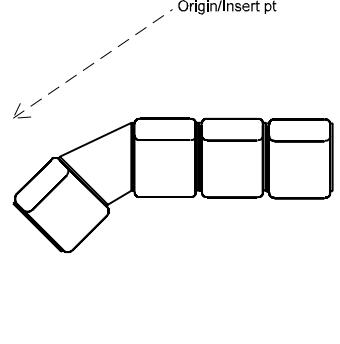
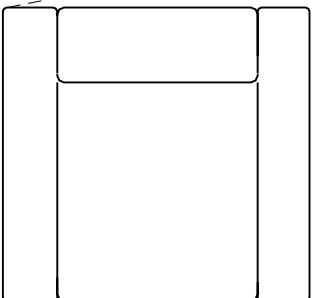
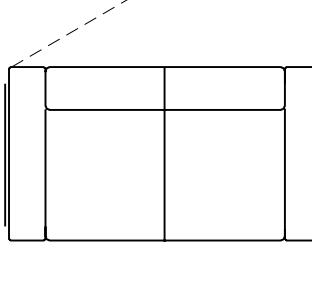
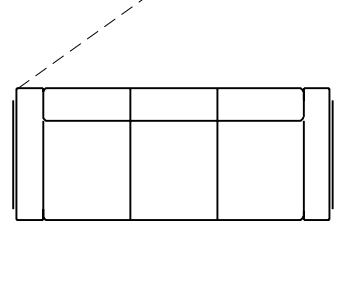
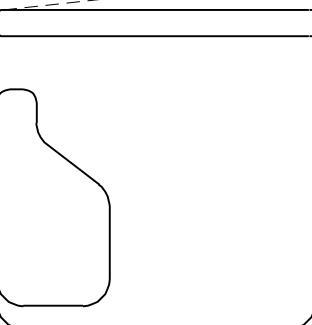
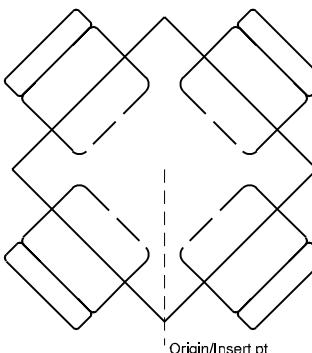
9 Interiors Objects Library

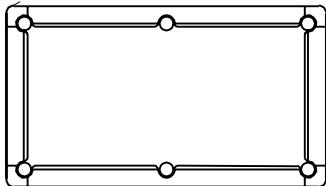
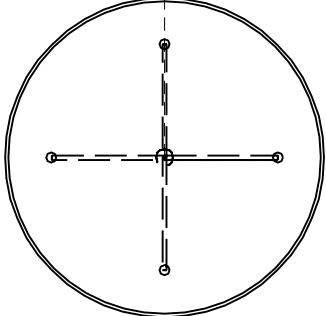
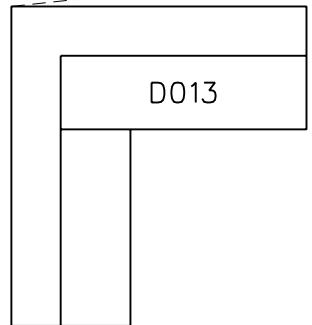
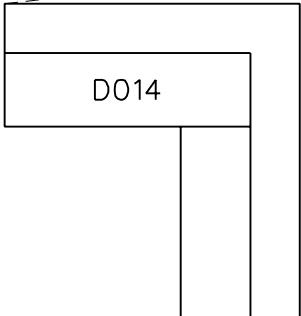
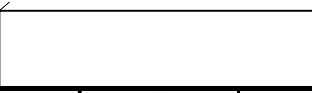
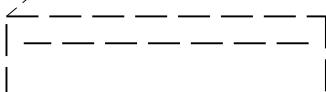
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Interiors: ABLLBD BULLETIN BOARD Element type: Object</p>	<p>Interiors: ACOSTM COSTUMER Element type: Object</p>	<p>Interiors: ADDCAB DOUBLE DOOR CABINET Element type: Object</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Interiors: AEAS30 EASEL 30W HIDDEN Element type: Object</p>	<p>Interiors: AMAG15 MAGAZINE RACK 15W X 3D Element type: Object</p>	<p>Interiors: AMAGLT MAGNIFYING LIGHT Element type: Object</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Interiors: APRJSC PROJECTION SCRN CEILNG MNTD Element type: Object</p>	<p>Interiors: ASTCAB STORAGE CABINET Element type: Object</p>	<p>Interiors: D65CLR DESK 65 COMP LR Element type: Object</p>

 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
<p>Interiors: D65CRR DESK 65 COMP RR Element type: Object</p>	<p>Interiors: D7230L LH SNGL PED DESK 72W X 30D2 Element type: Object</p>	<p>Interiors: D7230R RH SNGL PED DESK 72W X 30D2 Element type: Object</p>
 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
<p>Interiors: DPFF DESK DOUBLE FILE PEDESTAL Element type: Object</p>	<p>Interiors: DPFL DESK LEFT PEDESTAL Element type: Object</p>	<p>Interiors: DPFR DESK RETURN PEDESTAL FILE Element type: Object</p>
 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>	 <p style="text-align: center;">Origin/Insert pt</p>
<p>Interiors: DSC1 DESK STUDY CARREL SINGLE Element type: Object</p>	<p>Interiors: ECGAME FREESTANDING COMPUTER GAME Element type: Object</p>	<p>Interiors: ECOMCN COMSEC CONTAINER Element type: Object</p>

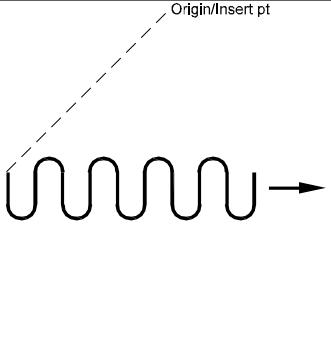
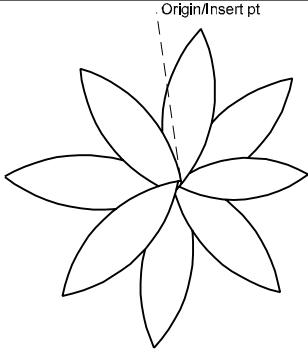
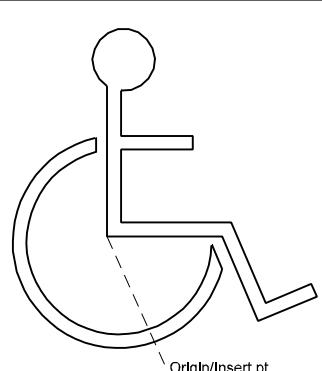
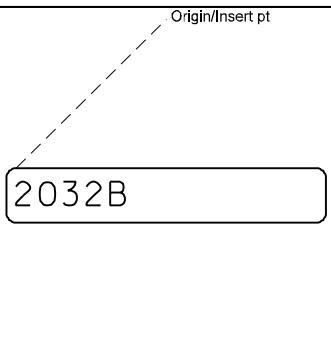
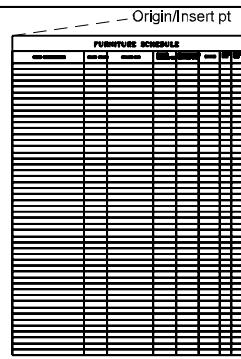
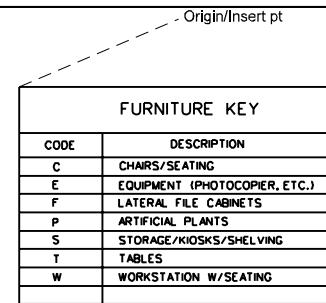
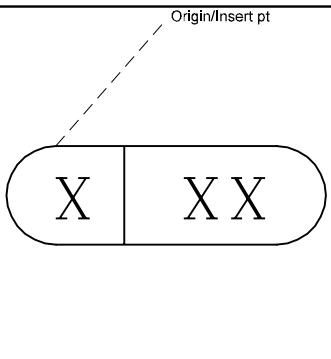
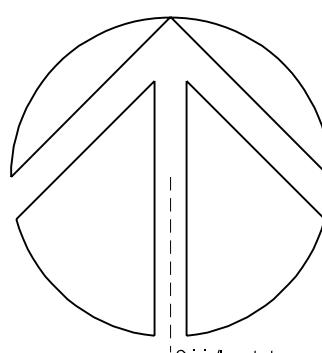
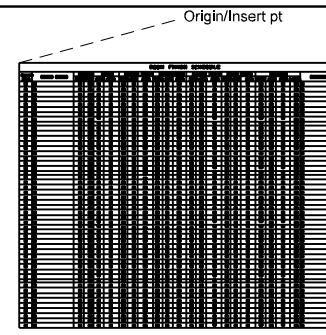
		
Interiors: EDRYER DRYER Element type: Object	Interiors: EPINBL PINBALL MACHINE Element type: Object	Interiors: EREFRG REFRIGERATOR Element type: Object
		
Interiors: ETV TELEVISION Element type: Object	Interiors: EVEND VENDING MACHINE Element type: Object	Interiors: EWASHM WASHING MACHINE Element type: Object
		
Interiors: F4DL LATERAL FILE CABINET 4 DRAW Element type: Object	Interiors: FC3618 STORAGE CABINET 36WX 18D Element type: Object	Interiors: FE7422 EQUIP SHELVNG 74WX22D BRRKS Element type: Object

		
Interiors: FV1833 VERTICAL FILE 18WX33D Element type: Object	Interiors: GIDIR DIRECTORY Element type: Object	Interiors: GIIS1 IDENT SIGN WITH 1 SLOT Element type: Object
		
Interiors: GIIS2 IDENT SIGN WITH 2 SLOTS Element type: Object	Interiors: GIPIC1 PICTOGRAM1 Element type: Object	Interiors: GIPIC2 PICTOGRAM 2 Element type: Object
		
Interiors: GMAN MAN SYM FR RESTROOM SIGNAGE Element type: Object	Interiors: GWOMAN WOMAN SYMFOR RESTRM SGNAGE Element type: Object	Interiors: SDMGT MGMT CHAIR W ARMS 24WX22D Element type: Object

		
Interiors: SDSEC SECRTRL CHR NO ARMS 23WX22D Element type: Object	Interiors: SDTASK TASK CHAIR Element type: Object	Interiors: SGANG GANG SEATING W TABLE Element type: Object
		
Interiors: SSOF37 SOFA CHAIR 37WX34D Element type: Object	Interiors: SSOF63 2 CUSHION SOFA 63WX34D Element type: Object	Interiors: SSOF82 3 CUSHION SOFA 82.5WX34D Element type: Object
		
Interiors: STAB24 CHAIR TABLET ARM 24WX24D Element type: Object	Interiors: T42SQ TABLE 42SQ W ARMLESS CHR Element type: Object	Interiors: TMS30 MAILSORT TBLE 160H SLOTS30W Element type: Object

		
Interiors:TPOOL POOL TABLE Element type: Object	Interiors:TROUND ROUND TABLE Element type: Object	Interiors:W7230L WORKSTATION L UNIT LR Element type: Object
		
Interiors:W7230R WORKSTATION L UNIT RR Element type: Object	Interiors:WCPDSK DESK COMPUTER Element type: Object	Interiors:WFLIPR FLIPPER DOOR UNIT Element type: Object
		
Interiors:WLIGHT WORKSTATION LIGHT Element type: Object	Interiors:WPED WORKSTATION PEDESTAL Element type: Object	

9 Interiors Symbols Library

		
Interiors: ACURTN CURTAIN Element type: Symbol	Interiors: APLANT ARTIFICIAL PLANT Element type: Symbol	Interiors: GHNDPC UNIVERSAL HANDICAP SYMBOL Element type: Symbol
		
Interiors: GIID IDENTIFICATION SIGN Element type: Symbol	Interiors: MFMATL FURNITURE MATERIAL LIST Element type: Symbol	Interiors: MFSCHD FURNITURE SCHEDULE Element type: Symbol
		
Interiors: MFSYMB FURNITURE SYMBOL Element type: Symbol	Interiors: MNORTH NORTH ARROW Element type: Symbol	Interiors: MRSCHD ROOM FINISH SCHEDULE Element type: Symbol

LEGEND	
TYPE	DESCRIPTION
A	DIRECTIONALS
B1	IDENTIFICATION
B2	ROOM OCCUPANT SIGN
B3	IDENTIFICATION - SERVICE
C	SERVICE PICTOGRAMS
D	EXTERIOR - ENTRANCE
E	EXTERIOR - EXIT
NUMBER	(X) 
SIGN TYPE	(X)

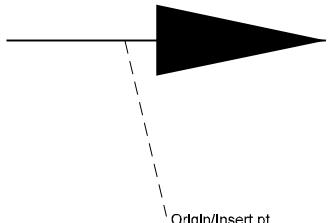
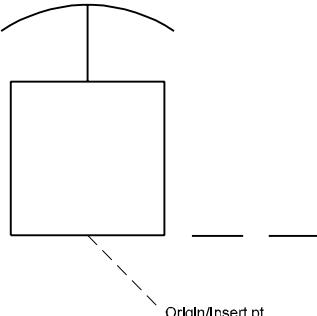
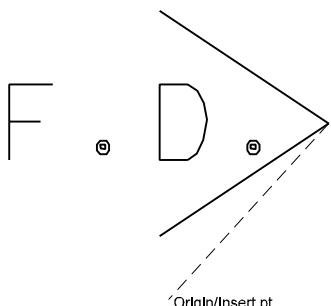
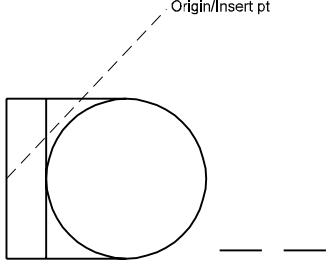
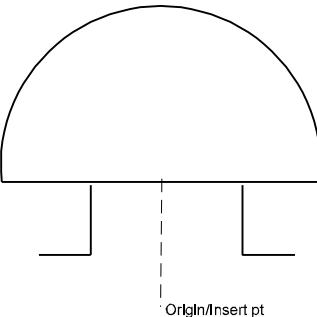
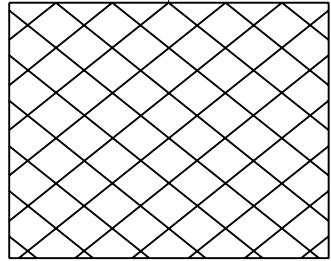
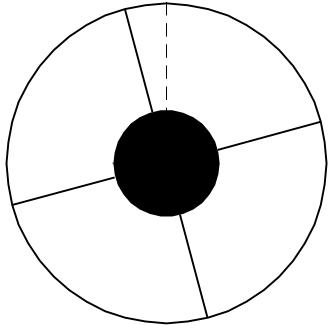
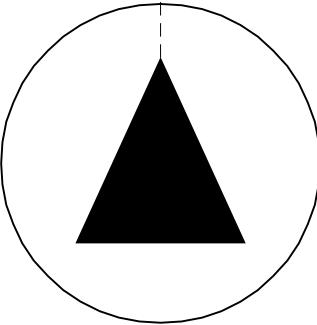
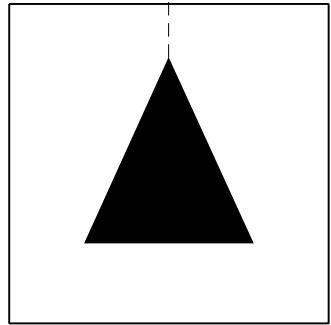
SEE SPECIFICATION 10430
AND 10440

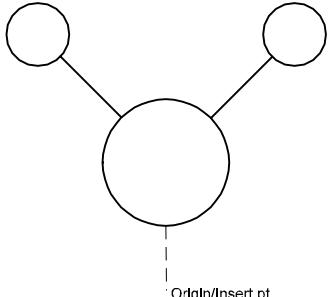
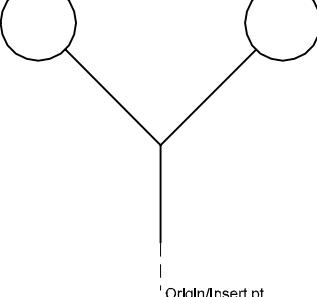
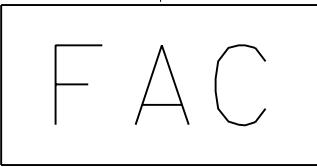
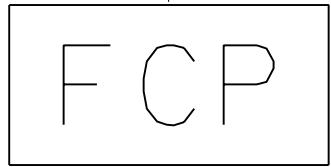
Interiors: MSSCHD
SIGNAGE SCHEDULE
Element type: Symbol

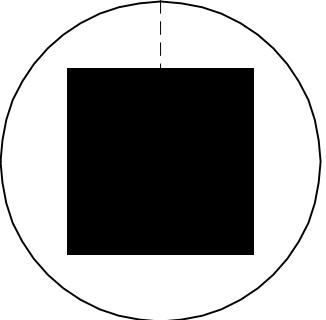
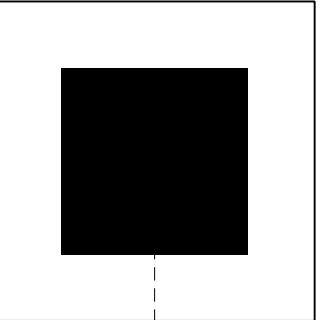
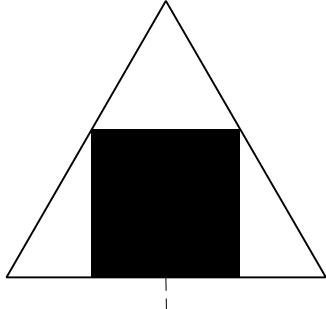
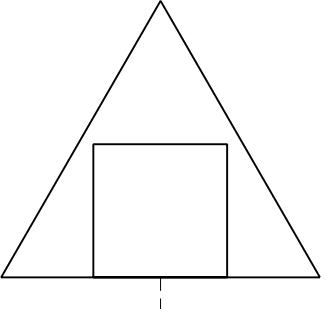
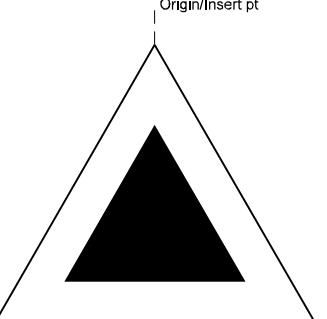
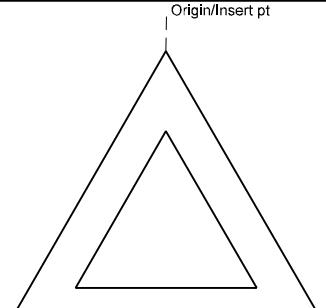
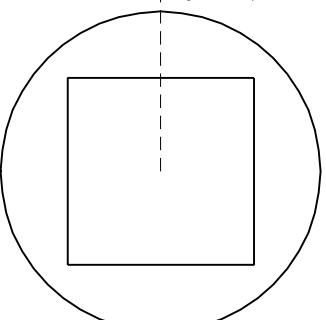
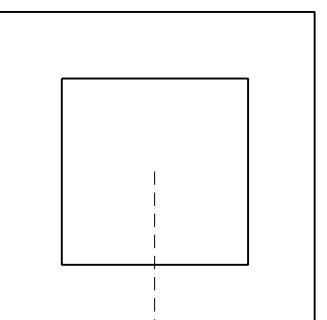
10 Fire Protection Lines Library

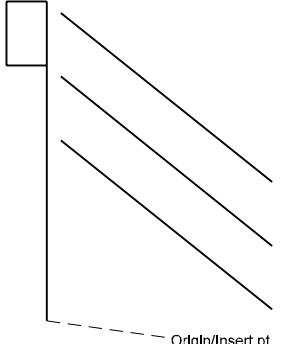
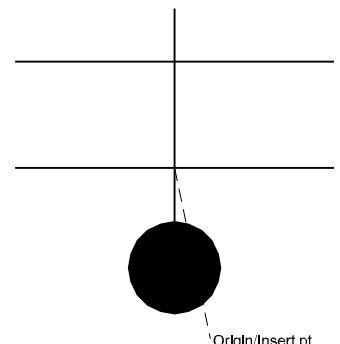
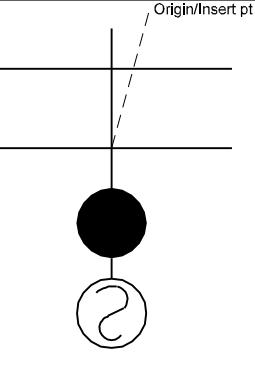
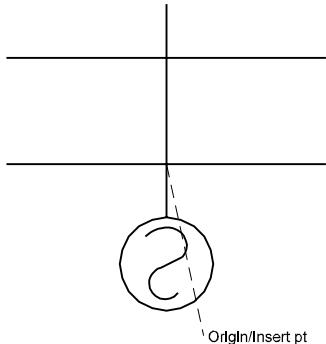
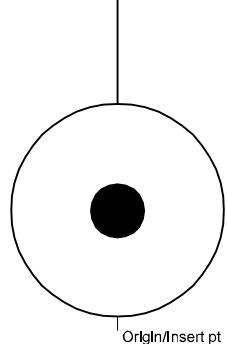
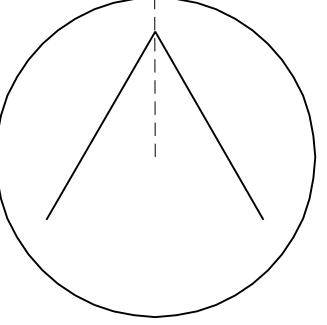
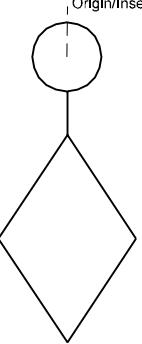
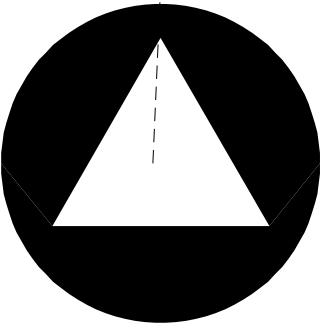
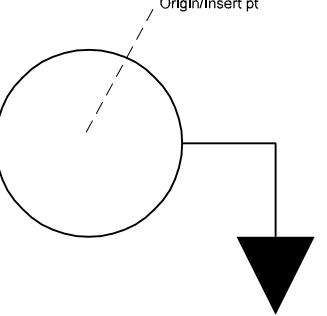
F		S
Fire Protection: FIRE FIRE PROTECTION WATR SUPPLY Element type: Line	Fire Protection: MANSUC SUCTION MAIN Element type: Line	Fire Protection: SPRINK MAIN SUPPLY SPRINKLER Element type: Line
C S P	D S P	W S P
Fire Protection: STDCOM COMBINATION STANDPIPE Element type: Line	Fire Protection: STDDRY DRY STANDPIPE Element type: Line	Fire Protection: STDWET WET STANDPIPE Element type: Line

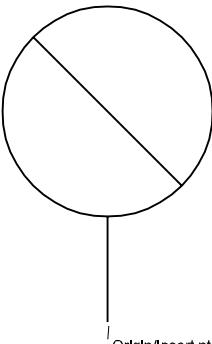
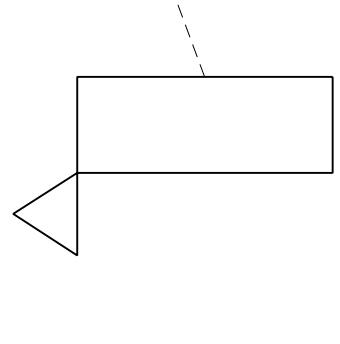
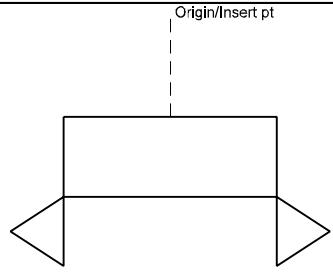
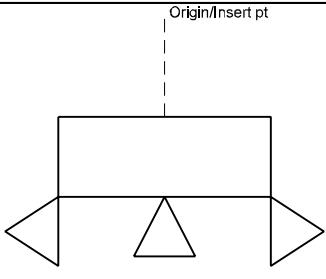
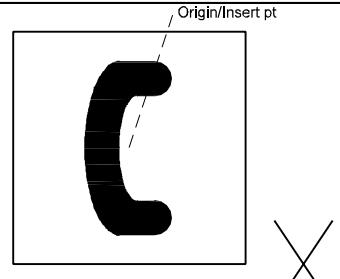
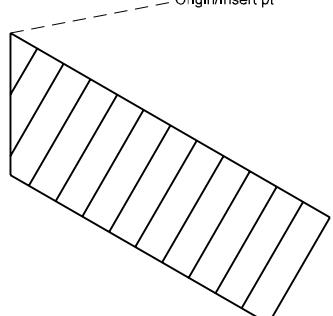
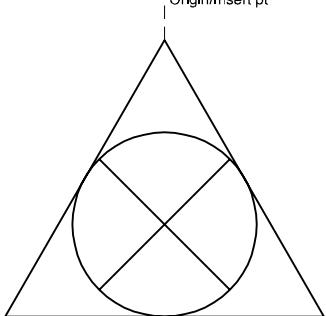
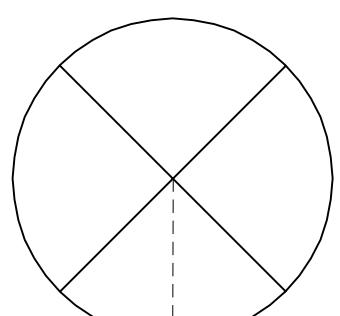
10 Fire Protection Symbols Library

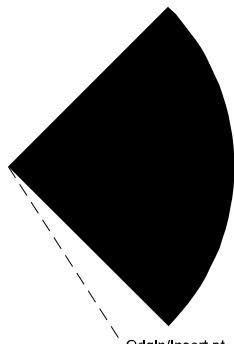
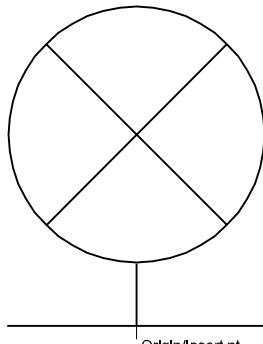
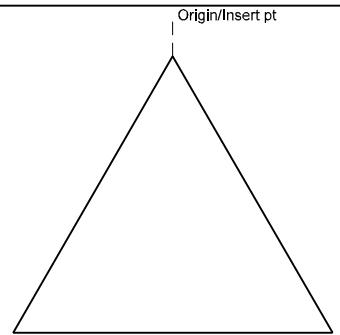
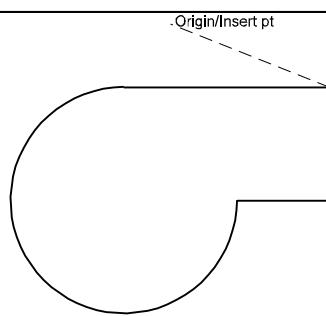
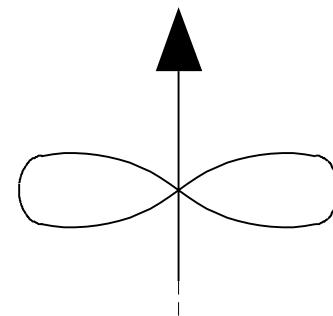
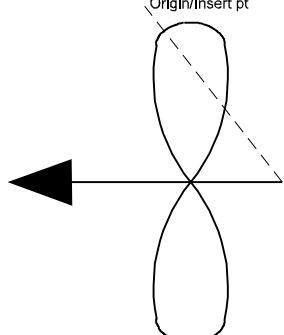
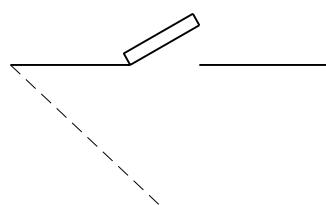
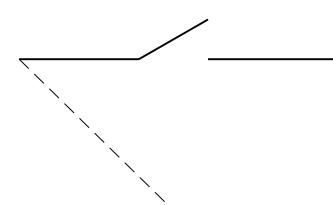
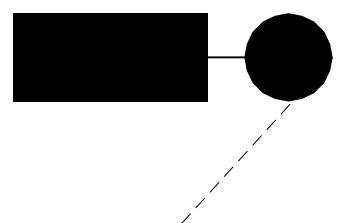
		
Fire Protection:1DIR DIRECTION ARROW Element type: Symbol	Fire Protection:ABORT ABORT SWITCH Element type: Symbol	Fire Protection:ACCESS FIRE DEPARTMENT ACCESS Element type: Symbol
		
Fire Protection:AGSTCN AGENT STORAGE CONTAINER Element type: Symbol	Fire Protection:BELLFA FIRE ALARM BELL Element type: Symbol	Fire Protection:BOILER BOILER Element type: Symbol
		
Fire Protection:CHIMNY CHIMNEY Element type: Symbol	Fire Protection:CO2AA CO2 AUTO ACTUATED EXNGSHR Element type: Symbol	Fire Protection:CO2MA CO2 MAN ACTUATED EXTNGSHR Element type: Symbol

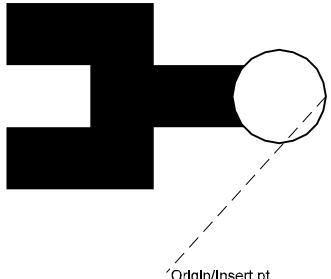
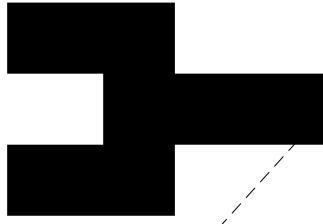
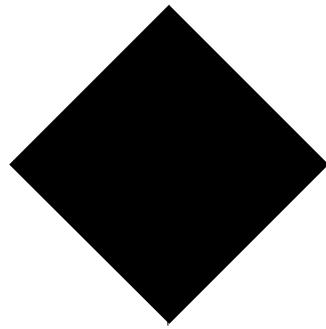
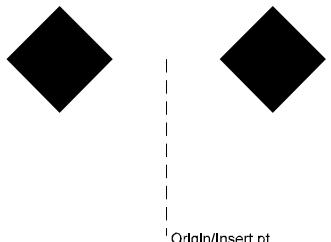
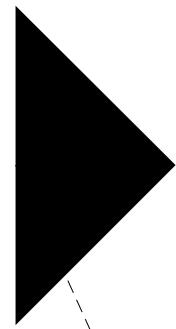
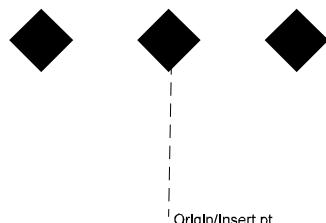
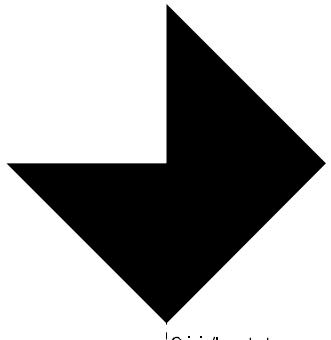
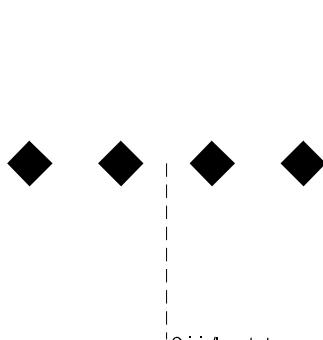
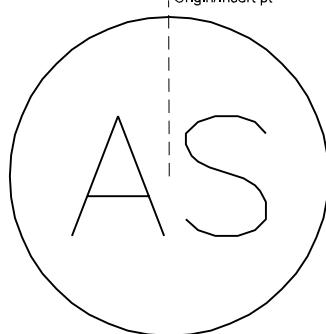
		
Fire Protection:CONSF FREESTNDNG SIAMESE F.D. CON Element type: Symbol	Fire Protection:CONSIA SIAMESE FIRE DPT CONNECTION Element type: Symbol	Fire Protection:CONSG SINGLE FIRE DPT. CONNECTION Element type: Symbol
		
Fire Protection:CPESR ELEVATOR STATUS RECALL Element type: Symbol	Fire Protection:CPFAC FIRE AL COMMUNICATOR Element type: Symbol	Fire Protection:CPFCP F A CONTROL PANEL Element type: Symbol
		
Fire Protection:CPFSA F A FIRE SYS ANNUNCIATOR Element type: Symbol	Fire Protection:CPFTR F A TRANSMITTER Element type: Symbol	Fire Protection:CPHCP HALON CONTROL PANEL Element type: Symbol

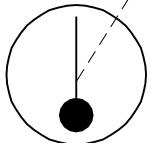
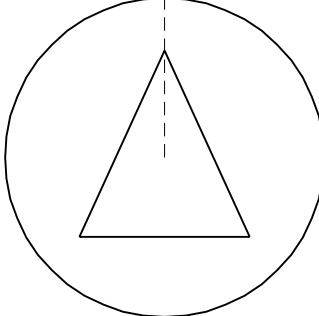
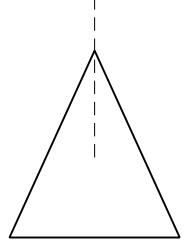
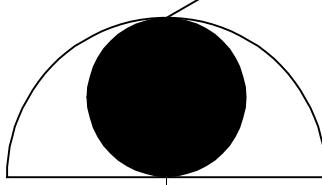
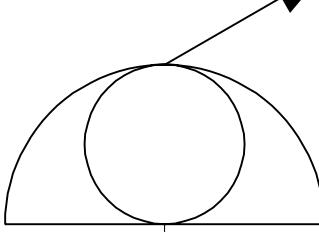
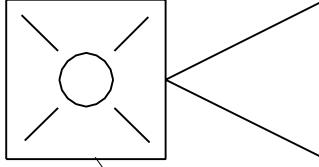
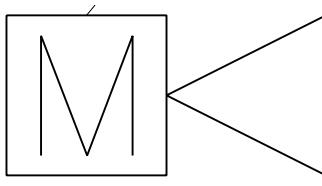
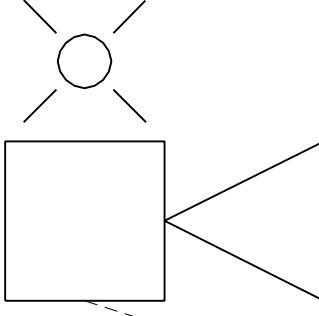
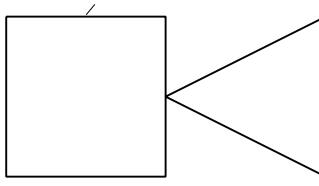
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:CPHVA CONTROL PANEL HVAC Element type: Symbol	Fire Protection:DCATAA ALLTYPE FIREEXTNGSHRAUTOACT Element type: Symbol	Fire Protection:DCATMA ALLTYPE FIREEXTNGSHR MANACT Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:DCEABC DRY CHEM EXTNGSHR ABC TYPE Element type: Symbol	Fire Protection:DCEBC DRY CHEM EXTNGUISHR BC TYPE Element type: Symbol	Fire Protection:DCECO2 CO2 EXTINGUISHER Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:DCEHLN HALON OR CLEANAGENTEXTNGSHR Element type: Symbol	Fire Protection:DCLGAA DRY CHEM AUTO ACT EXTNGSHR Element type: Symbol	Fire Protection:DCLGMA DRY CHEM MAN ACTUATED Element type: Symbol

		
Fire Protection:DMPBAR BAROMETRIC DAMPER Element type: Symbol	Fire Protection:DMPFIR FIRE DAMPER Element type: Symbol	Fire Protection:DMPFS FIRE SMOKE DAMPER Element type: Symbol
		
Fire Protection:DMPSMK SMOKE DAMPER Element type: Symbol	Fire Protection:DRHOLD DOOR HOLDER Element type: Symbol	Fire Protection:DTFLAM FLAME DETECTOR Element type: Symbol
		
Fire Protection:DTFLOW FA FLOW DETECTOR Element type: Symbol	Fire Protection:DTGAS FA GAS DETECTOR Element type: Symbol	Fire Protection:DTLEVL FA LEVEL DETECTOR Element type: Symbol

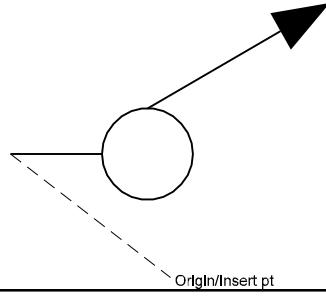
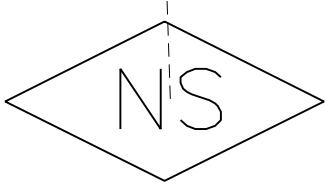
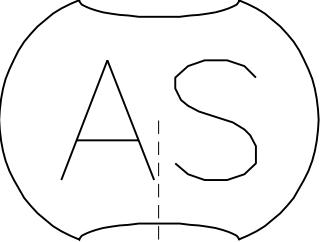
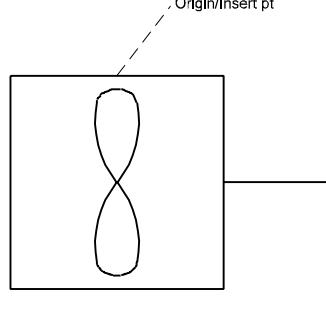
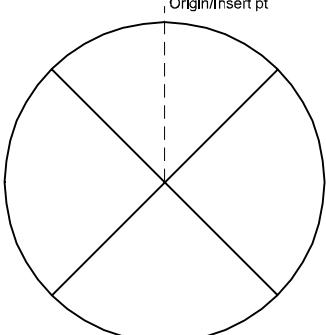
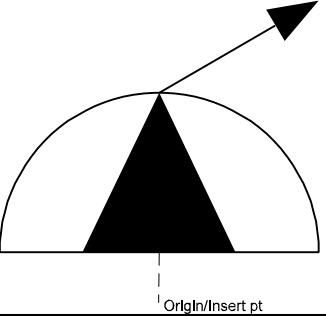
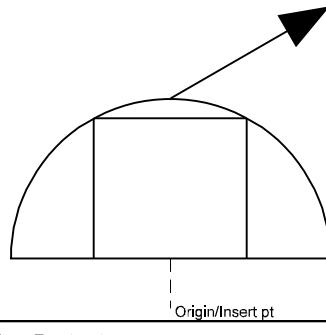
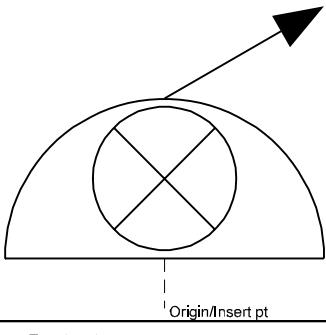
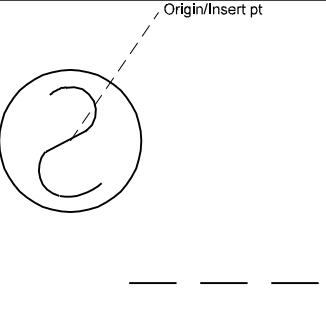
		
Fire Protection:DTPRES FA PRESSURE DETECTOR Element type: Symbol	Fire Protection:DTTAMP FA TAMPER DETECTOR Element type: Symbol	Fire Protection:ELBP1L 1LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol
		 
Fire Protection:ELBP2L 2LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol	Fire Protection:ELBP3L 3LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol	Fire Protection:EPSTA EMERGENCY PHONE STATION Element type: Symbol
		
Fire Protection:ESCAPE FIRE ESCAPE Element type: Symbol	Fire Protection:EXFOAM FOAM EXTINGUISHER Element type: Symbol	Fire Protection:EXITCM CEILING MNTD EXITSIGN LIGHT Element type: Symbol

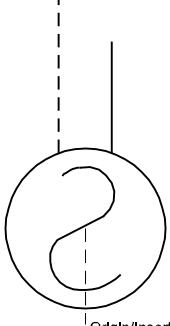
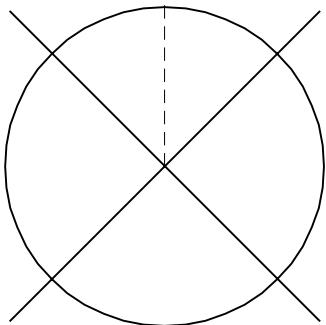
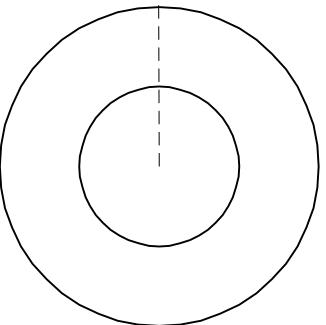
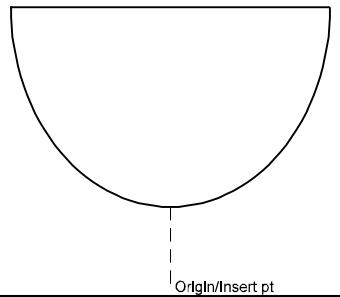
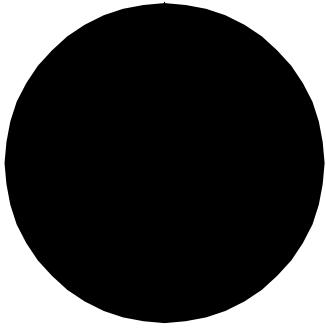
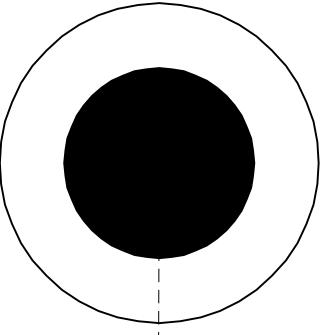
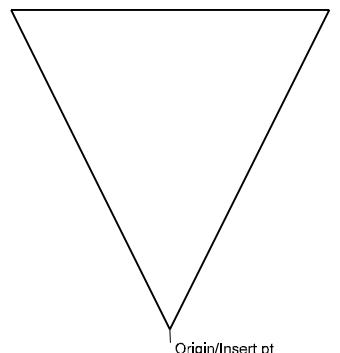
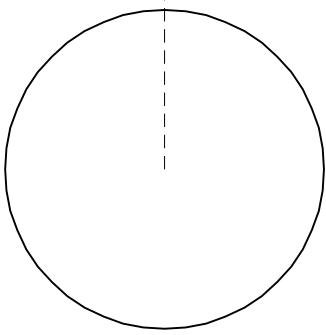
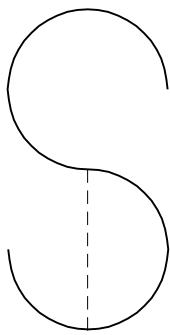
		
Fire Protection: EXITLF EXIT SIGN LIGHTED FACE Element type: Symbol	Fire Protection: EXITWM WALL MOUNTED EXIT SIGN LIGHT Element type: Symbol	Fire Protection: EXWATR WATER EXTINGUISHER Element type: Symbol
		
Fire Protection: FANDCT DUCT FAN Element type: Symbol	Fire Protection: FANGEN GENERAL FAN Element type: Symbol	Fire Protection: FANWAL WALL FAN Element type: Symbol
		
Fire Protection: FDOR3 3HR RATED FIRE DOOR IN WALL Element type: Symbol	Fire Protection: FDORL3 WALL W 3 HOUR RATED DOOR Element type: Symbol	Fire Protection: FPDRIV FIRE PUMP WITH DRIVES Element type: Symbol

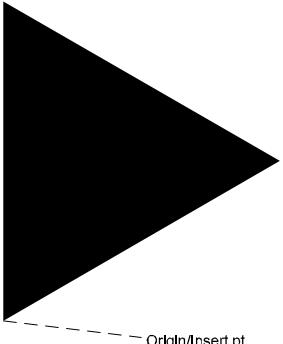
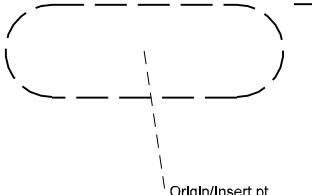
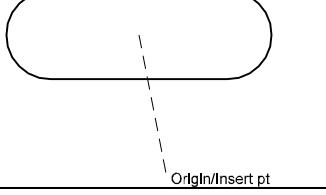
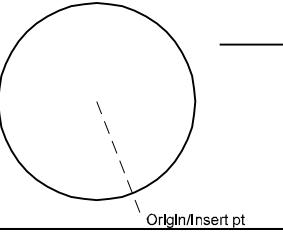
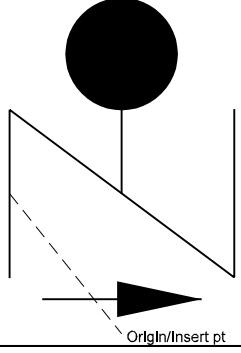
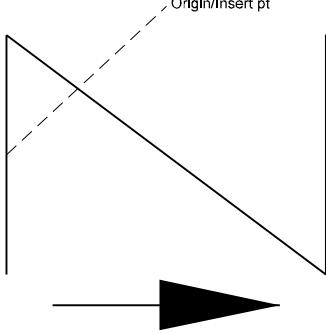
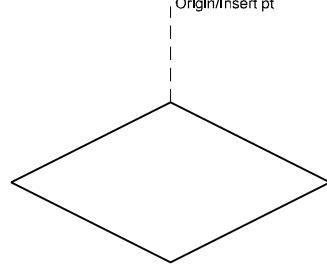
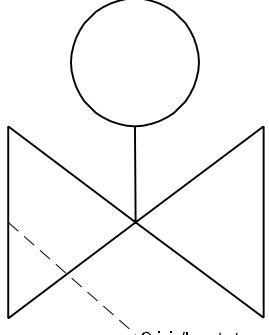
		
Fire Protection: FPFREE FREE STANDING TEST HEADER Element type: Symbol	Fire Protection: FPTEST WALL MOUNTED TEST HEADER Element type: Symbol	Fire Protection: FRR1HR 1 HR FIRE RATING Element type: Symbol
		
Fire Protection: FRR2HR 2 HR FIRE RATING Element type: Symbol	Fire Protection: FRR30M 30 MIN FIRE RATING Element type: Symbol	Fire Protection: FRR3HR 3 HR FIRE RATING Element type: Symbol
		
Fire Protection: FRR45M 45 MIN FIRE RATING Element type: Symbol	Fire Protection: FRR4HR 4 HR FIRE RATING Element type: Symbol	Fire Protection: FULLSS FULLY SPRINKLERED SPACE Element type: Symbol

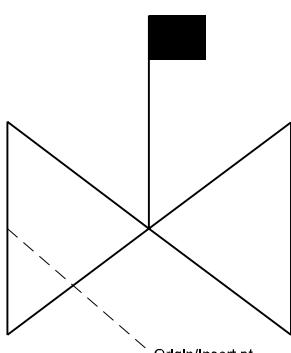
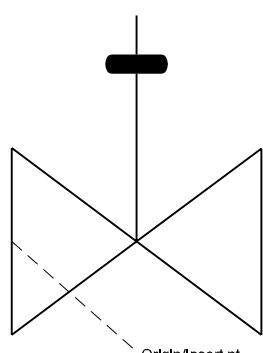
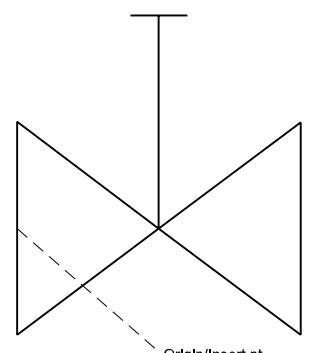
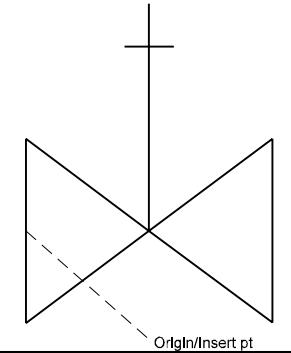
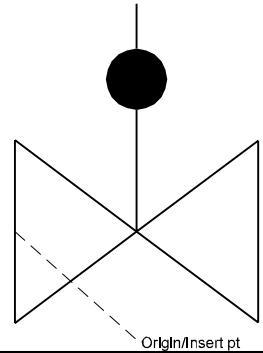
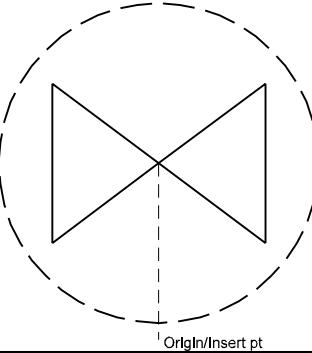
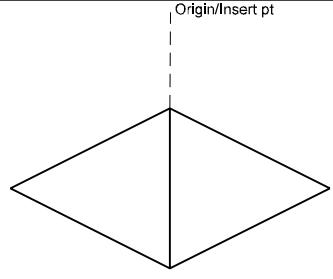
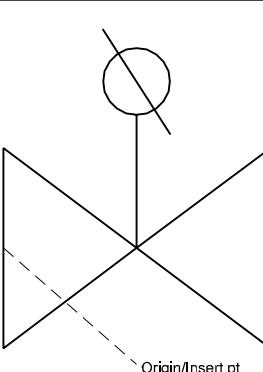
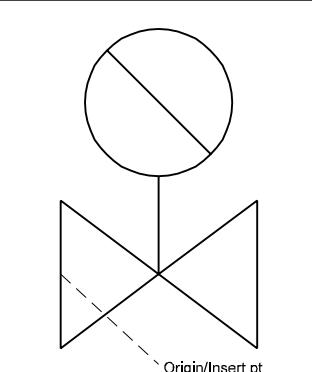
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:HD HEAT DETECTOR Element type: Symbol	Fire Protection:HLNAA AUTO ACT HALON EXTINGUISHER Element type: Symbol	Fire Protection:HLNMA MAN ACT HALON EXTNGSHR Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:HOSECS HOSE STATION CHRGD STNDPIPE Element type: Symbol	Fire Protection:HOSEDS HOSE STATION DRY STANDPIPE Element type: Symbol	Fire Protection:HRN1A HORN LIGHT 1 ASSY Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:HRNMIN MINI HORN Element type: Symbol	Fire Protection:HRNSA SEPARATE ASSEMBLY HORN LGHT Element type: Symbol	Fire Protection:HRNSPK HORN SPEAKER Element type: Symbol

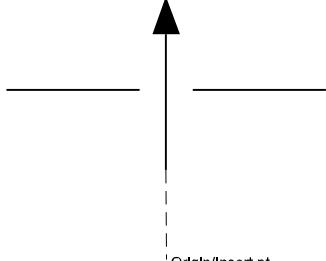
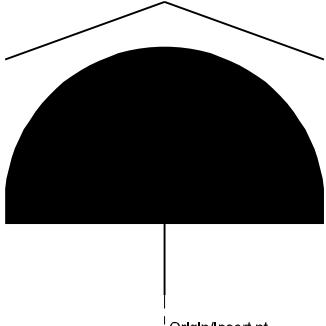
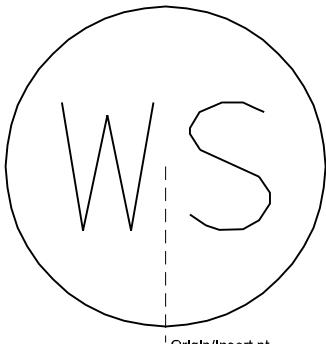
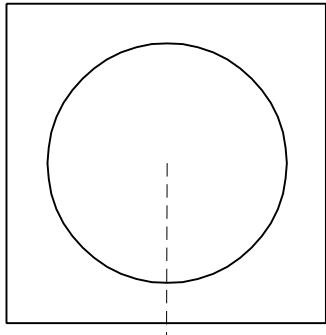
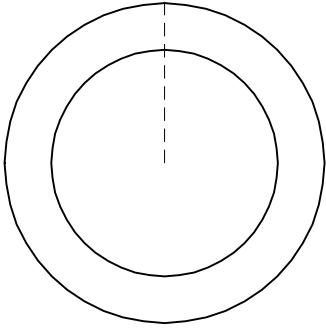
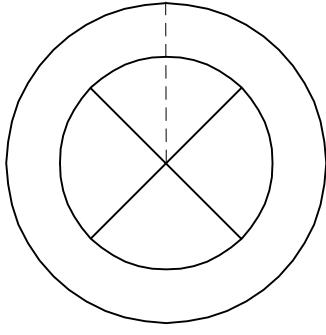
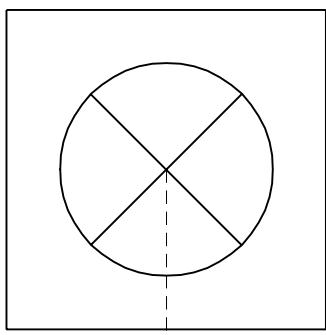
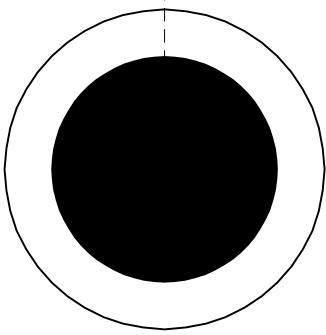
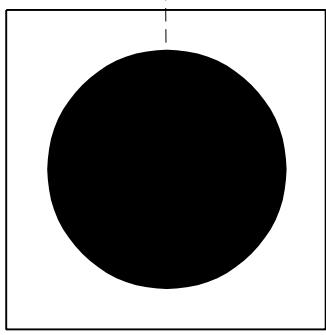
Fire Protection:HYDPR1 PRIV HYDRANT 1 HOSE OUTLET Element type: Symbol	Fire Protection:HYDPR2 PRIVATE HOUSED HYDRANT Element type: Symbol	Fire Protection:HYDPU2 PUBLIC TWO HOSE OUTLET HYD Element type: Symbol
Fire Protection:HYDPUP PUBHYDRNT2HOSOUTLTPMPCONN Element type: Symbol	Fire Protection:HYDW2H WALL HYDRANT 2 HOSE OUTLET Element type: Symbol	Fire Protection:LITFAS FA STROBE LIGHT Element type: Symbol
Fire Protection:MANSTA MANUAL STATION Element type: Symbol	Fire Protection:METRFP FP METER Element type: Symbol	Fire Protection:MNCHRG MONITOR NOZZLE CHARGED Element type: Symbol

		
Fire Protection: MNDRY MONITOR NOZZLE DRY Element type: Symbol	Fire Protection: NONSS NONSPRINKLERED SPACE Element type: Symbol	Fire Protection: PARTSS PARTIALLY SPRINKLERED SPACE Element type: Symbol
		
Fire Protection: PURGE MANUAL PURGE CONTROL Element type: Symbol	Fire Protection: RISER RISER Element type: Symbol	Fire Protection: RSCO2 CO2 REEL STATION Element type: Symbol
		
Fire Protection: RSDRYC DRY CHEMICAL REEL STATION Element type: Symbol	Fire Protection: RSFOAM FOAM REEL STATION Element type: Symbol	Fire Protection: SD SMOKE DETECTOR Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:SDUCT SMOKE DETECTOR FOR DUCT Element type: Symbol	Fire Protection:SHGARD SPRINKLER HEAD W GUARD Element type: Symbol	Fire Protection:SHNUU NIPPLED UP UPRIGHT SPRNKL Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:SHOUT OUTSIDE SPRINKLER HEAD Element type: Symbol	Fire Protection:SHPEND PENDENT SPRINKLER HEAD Element type: Symbol	Fire Protection:SHPNND PENDENTSPRNKL DRP NIPPL Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:SHSIDE SIDEWALL SPRINKLER HEAD Element type: Symbol	Fire Protection:SHUPRT UPRIGHT SPRINKLER HEAD Element type: Symbol	Fire Protection:SMKBR SMOKE BARRIER Element type: Symbol

		
Fire Protection:SSNOZZ SPECIAL SPRAY NOZZLE Element type: Symbol	Fire Protection:THRUST THRUST BLOCK Element type: Symbol	Fire Protection:TNKBG TANK BELOW GROUND Element type: Symbol
		
Fire Protection:TNKHAG TANK HORIZ ABOVE GROUND Element type: Symbol	Fire Protection:TNKVAG TANK VERTICAL ABOVE GROUND Element type: Symbol	Fire Protection:VLVCHA ALARM CHECK VALVE Element type: Symbol
		
Fire Protection:VLVCHK CHECK VALVE Element type: Symbol	Fire Protection:VLVDEL DELUGE VALVE Element type: Symbol	Fire Protection:VLVDRY DRY PIPE VALVE Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:VLVIBF INDICATING BUTTERFLY VALVE Element type: Symbol	Fire Protection:VLVKEY KEY OPERATED VALVE Element type: Symbol	Fire Protection:VLVNONT VALVE NONRISING STEM Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:VLVOSY OS Y VALVE Element type: Symbol	Fire Protection:VLVPI POST INDICATOR VALVE Element type: Symbol	Fire Protection:VLVPIT VALVE IN PIT Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:VLVPRE PREACTION VALVE Element type: Symbol	Fire Protection:VLVQOD VALVE W QUICK OPENNG DEVICE Element type: Symbol	Fire Protection:VLVTDS VALVE TAMPERDETECTION SWTC Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:VNTPN VENTILATION OPENINGS Element type: Symbol	Fire Protection:WALARM WATER MOTOR ALARM Element type: Symbol	Fire Protection:WATRSS WATER SPRAY SYSTEM Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:WBDSMA WATER BASED DRY SYS MAN ACT Element type: Symbol	Fire Protection:WBDSSA WATERBASED DRY SYS AUTO ACT Element type: Symbol	Fire Protection:WBFSA WATR BASED FOAM SYS AUTOACT Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Fire Protection:WBFSMA WATR BASED FOAM SYS MANACT Element type: Symbol	Fire Protection:WBWSAA WATERBASED WET SYS AUTO ACT Element type: Symbol	Fire Protection:WBWSMA WATER BASED WET SYS MAN ACT Element type: Symbol

11 Plumbing Lines Library

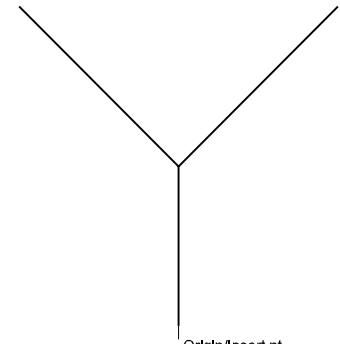
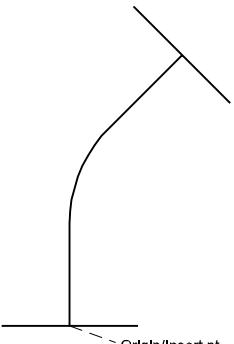
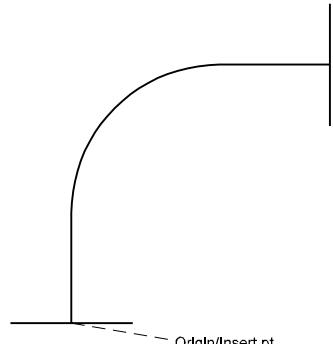
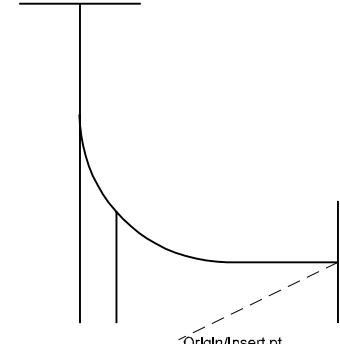
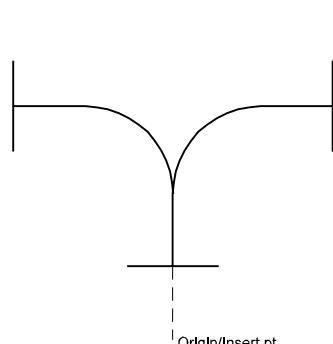
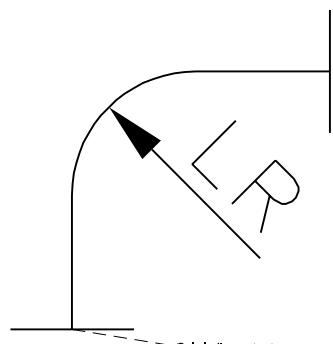
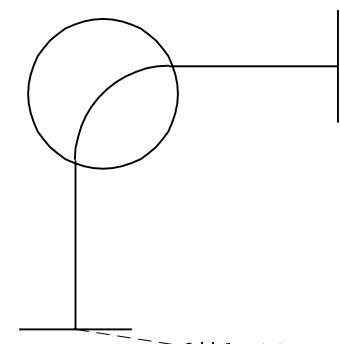
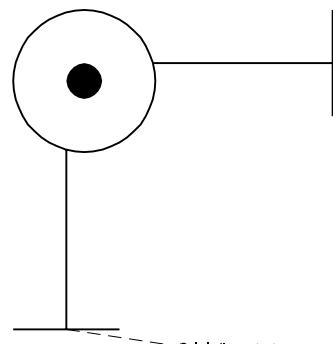
	— C D —	— — — — —	— A —
Plumbing:CDRNAF CONDENSATE DRAIN Element type: Line	Plumbing:CLDWTR POTABLE COLD WATER Element type: Line	Plumbing:CMPAIR COMPRESSED AIR Element type: Line	
— D E —	— D I —	— F —	
Plumbing:DIOWTR DEIONIZED WATER Element type: Line	Plumbing:DSTWTR DISTILLED WATER Element type: Line	Plumbing:FIRE FIRE PROTECTION WATR SUPPLY Element type: Line	
— F O R —	— F O S —	— F O V —	
Plumbing:FUELOR FUEL OIL RETURN Element type: Line	Plumbing:FUELOS FUEL OIL SUPPLY Element type: Line	Plumbing:FUELOV FUEL OIL TANK VENT Element type: Line	

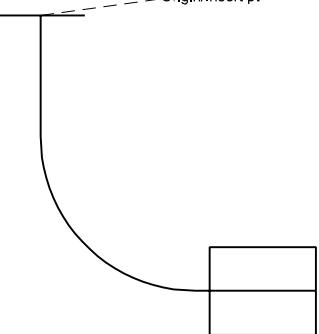
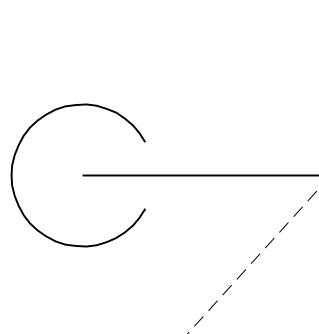
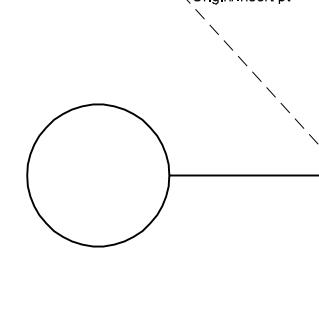
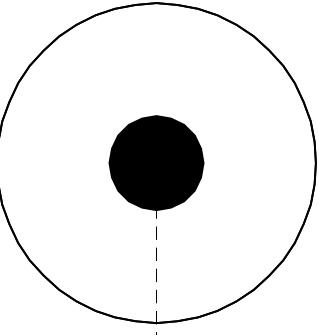
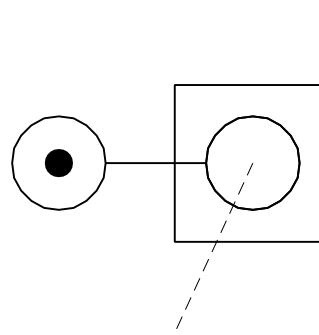
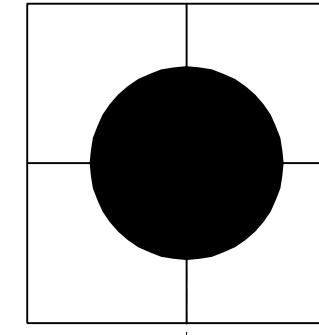
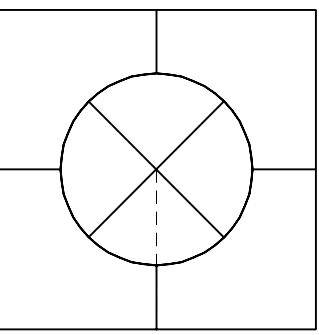
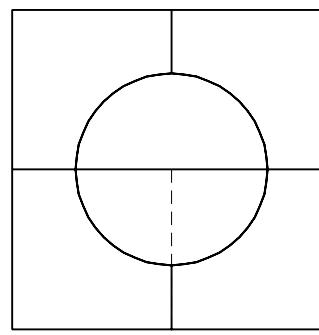
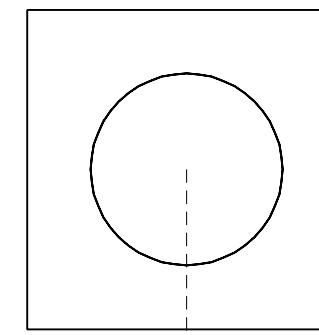
	H E	
Plumbing:HELIUM HELIUM Element type: Line	Plumbing:HWTR POTABLE HOT WATER Element type: Line	Plumbing:HWTRR POTABLE HOT WATER RETURN Element type: Line
	H	I C W
Plumbing:HYDRGN HYDROGEN Element type: Line	Plumbing:ICWTR INDUSTRIAL COLD WATER Element type: Line	Plumbing:IHWTRR INDUSTRIAL HOT WATER RETURN Element type: Line
I H W	I D	L N
Plumbing:IHWTRS INDUSTRIAL HOT WATER SUPPLY Element type: Line	Plumbing:INDDRN INDIRECT DRAIN Element type: Line	Plumbing:LIQNIT LIQUID NITROGEN Element type: Line

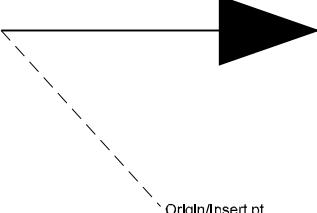
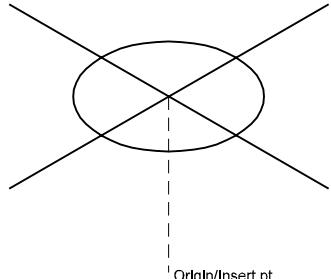
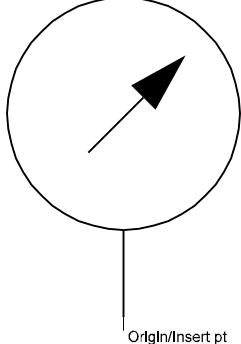
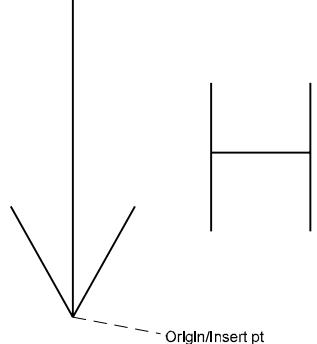
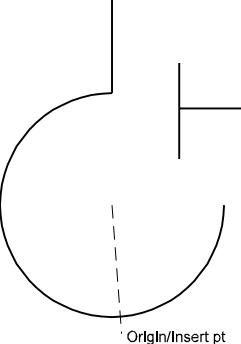
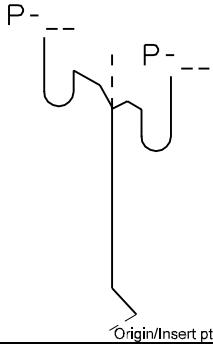
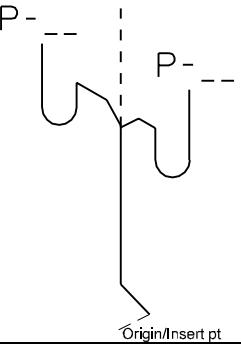
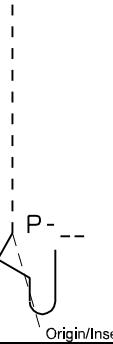
— L O X —	— L P G —	— N O —
Plumbing:LIQOXY LIQUID OXYGEN Element type: Line	Plumbing:LIQPET LIQUID PETROLEUM GAS Element type: Line	Plumbing:NITOXI NITROUS OXIDE Element type: Line
— N —	— N P W —	— G —
Plumbing:NITROG NITROGEN Element type: Line	Plumbing:NONPOT NONPOTABLE WATER Element type: Line	Plumbing:NTGASN NATURAL GAS Element type: Line
— O X —	— P N —	— R D —
Plumbing:OXYGEN OXYGEN Element type: Line	Plumbing:PNTUBE PNEUMATIC TUBE RUNS Element type: Line	Plumbing:ROOFDN ROOF DRAIN Element type: Line

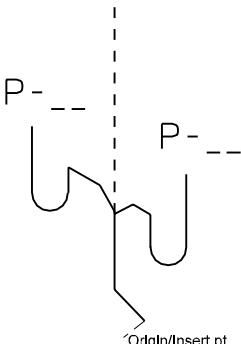
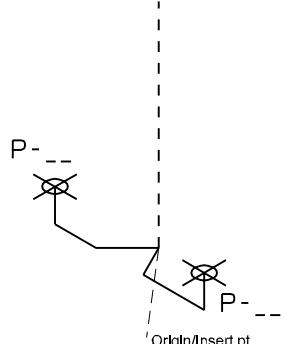
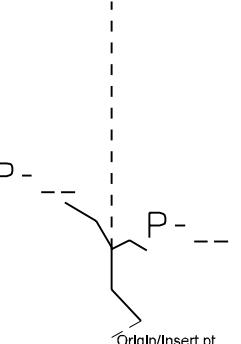
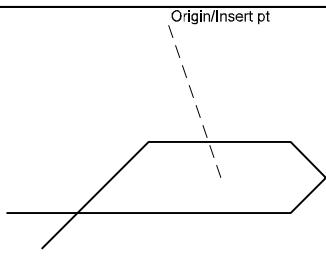
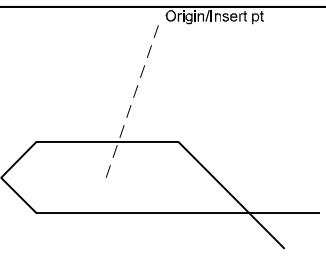
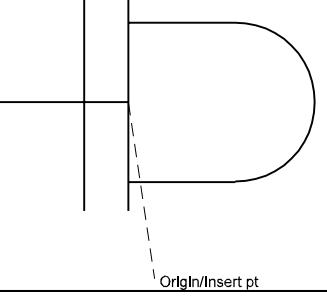
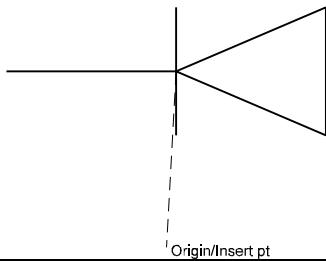
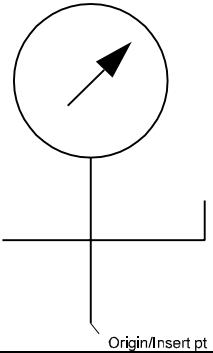
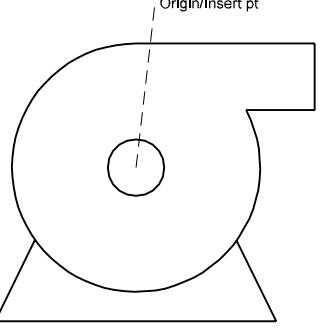
	S W	/ - - -	/ - - -
Plumbing:SFCWTR SOFT WATER Element type: Line	Plumbing:SHWTRR SANITIZING HOT WATER RETURN Element type: Line	Plumbing:SHWTRS SANITIZING HOT WATER SUPPLY Element type: Line	
S S	S D	V A C	
Plumbing:SSWAF SANITARY SEWER Element type: Line	Plumbing:STRAF STORM DRAIN Element type: Line	Plumbing:VACAIR VACUUM AIR Element type: Line	
- - - - -	S V		
Plumbing:VENT VENT Element type: Line	Plumbing:VENTWS VENT AND WASTE COMBINATION Element type: Line		

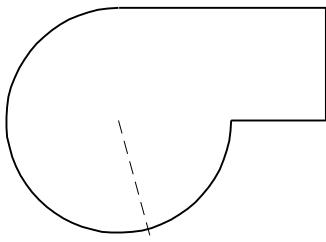
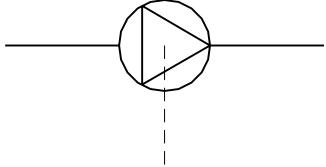
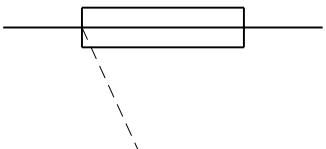
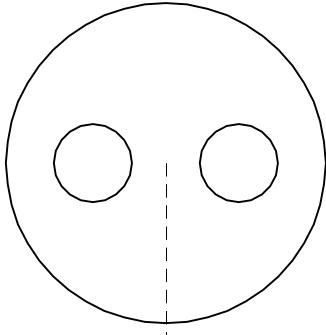
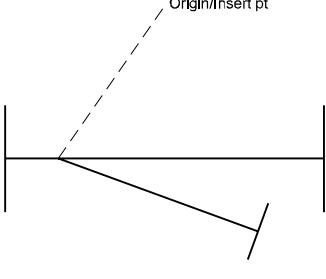
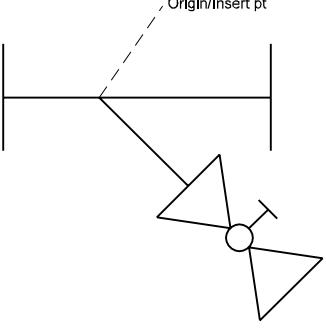
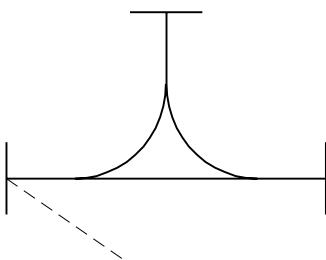
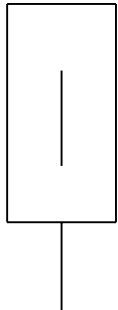
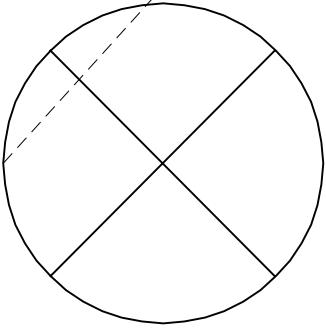
11 Plumbing Symbols Library

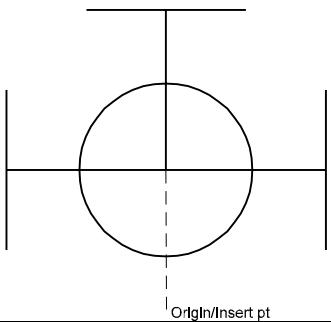
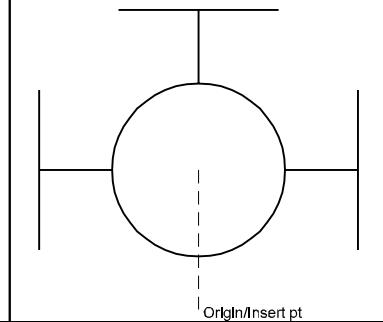
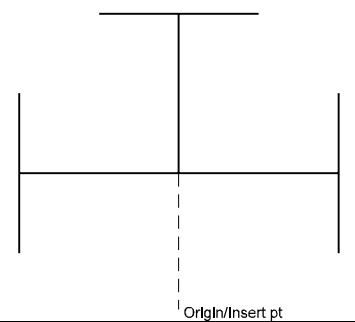
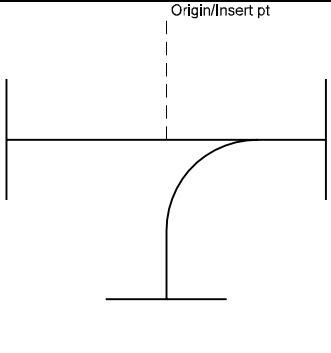
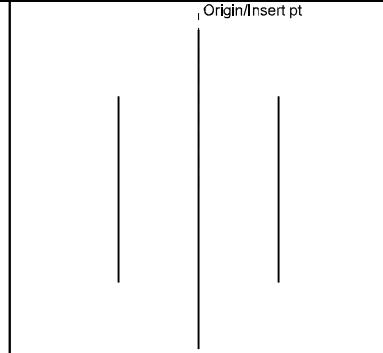
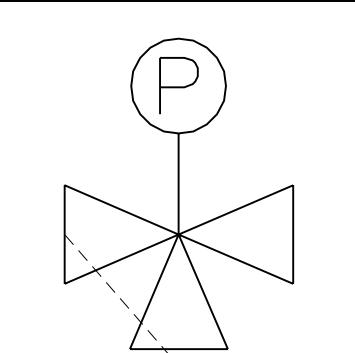
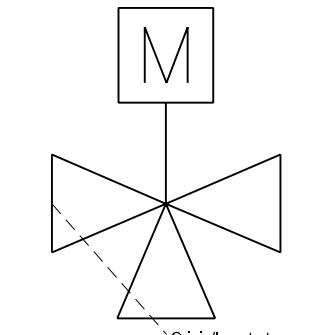
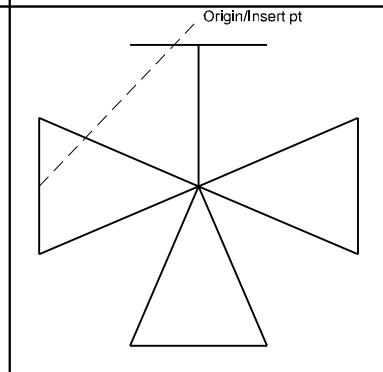
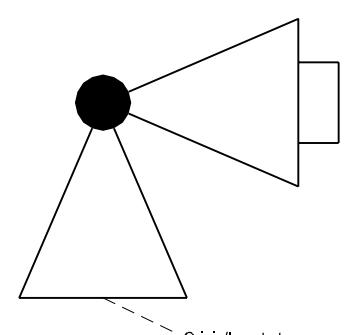
		
Plumbing:CAPSC CAP Element type: Symbol	Plumbing:DRNFUN OPEN DRAIN FUNNEL Element type: Symbol	Plumbing:EL45SC 45 DEGREE ELBOW Element type: Symbol
		
Plumbing:EL90SC 90 DEGREE ELBOW Element type: Symbol	Plumbing:ELBSC BASE ELBOW Element type: Symbol	Plumbing:ELDBSC DOUBLE BRANCH ELBOW Element type: Symbol
		
Plumbing:ELLRSC LONG RADIUS ELBOW Element type: Symbol	Plumbing:ELODSC ELBOW SIDE OUTLET DOWN Element type: Symbol	Plumbing:ELOUSC ELBOW SIDE OUTLET UP Element type: Symbol

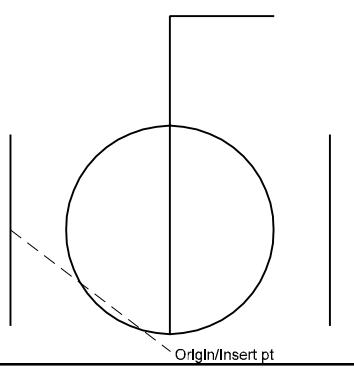
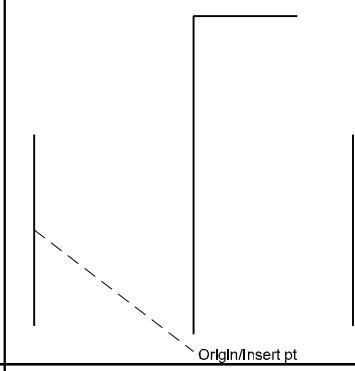
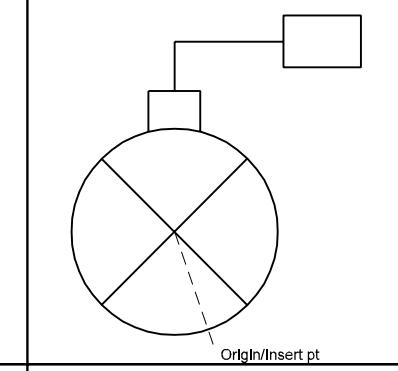
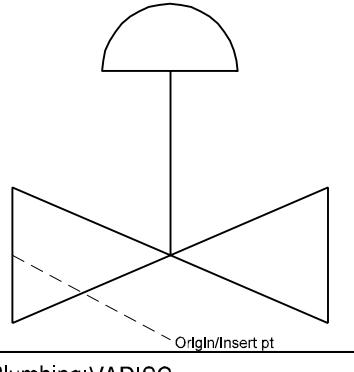
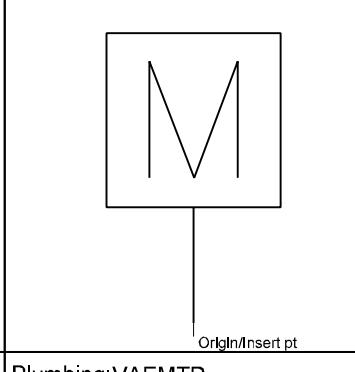
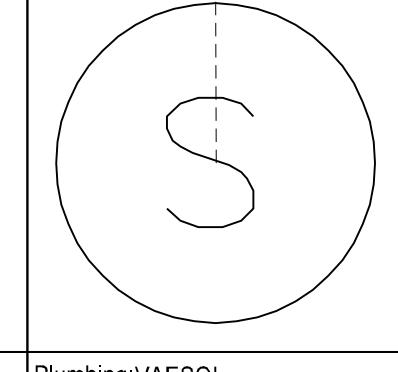
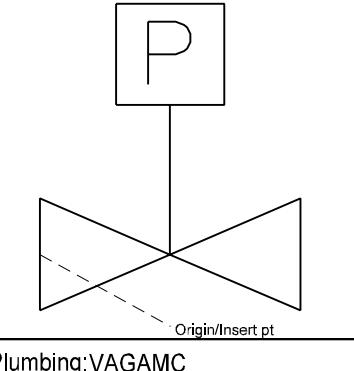
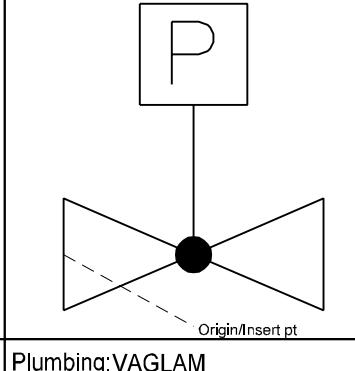
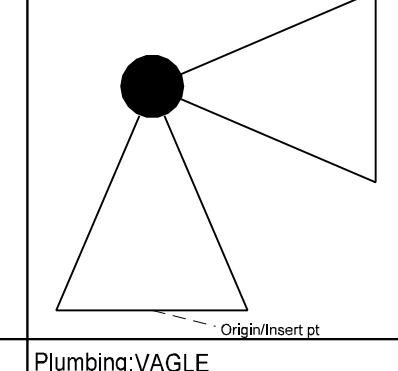
		
Plumbing:ELSTRT STREET ELBOW Element type: Symbol	Plumbing:ELTDSC TURNED DOWN ELBOW Element type: Symbol	Plumbing:ELTUSC TURNED UP ELBOW Element type: Symbol
		
Plumbing:FCO FLOOR CLEANOUT Element type: Symbol	Plumbing:FDCO FLOOR DRAIN WITH CLEANOUT Element type: Symbol	Plumbing:FDDT FLOOR DRAIN WITH DEEP TRAP Element type: Symbol
		
Plumbing:FDNT FLOOR DRAIN WITH NO TRAP Element type: Symbol	Plumbing:FDTPT FLOOR DRAIN WITH TRAP PRIME Element type: Symbol	Plumbing:FDWT FLOOR DRAIN WITH TRAP Element type: Symbol

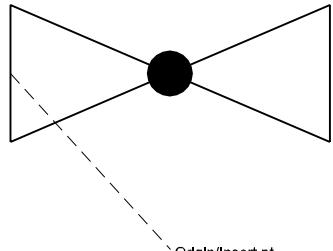
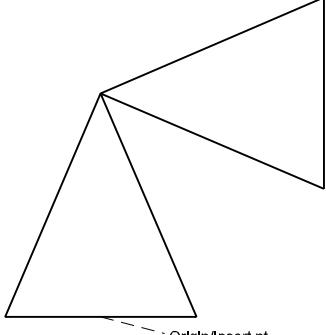
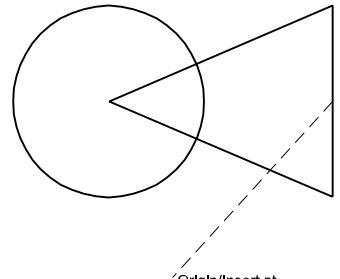
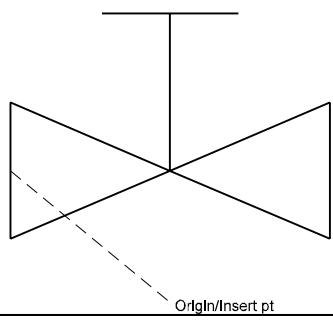
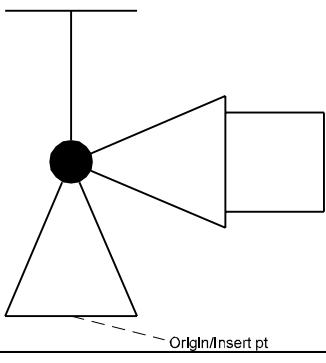
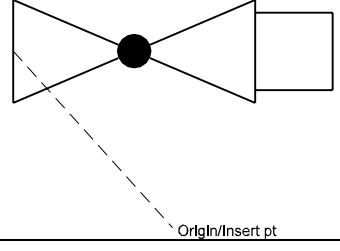
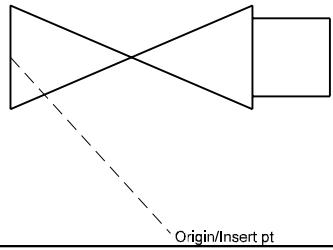
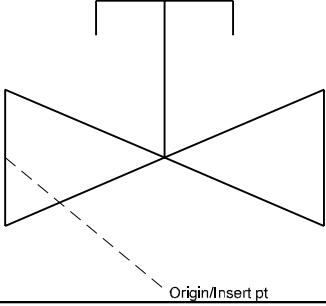
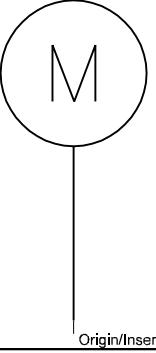
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:FLBLND BLIND FLANGE Element type: Symbol	Plumbing:FLOW3 FLOW ARROW Element type: Symbol	Plumbing:FLRPEN FLOOR PENETRATION ISO Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:GAUGE GAUGE Element type: Symbol	Plumbing:HANGRD HANGER ROD Element type: Symbol	Plumbing:HANGSP HANGER SPRING Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:ISOEWC ISOMETRIC EWC Element type: Symbol	Plumbing:ISOLAV ISOMETRIC LAVATORIES Element type: Symbol	Plumbing:ISOMOP ISO MOP SINK Element type: Symbol

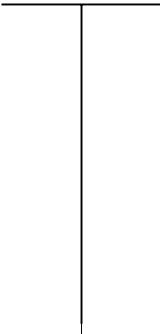
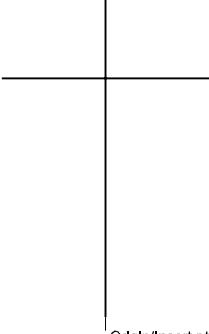
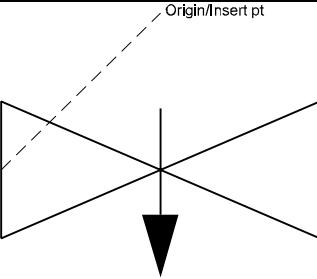
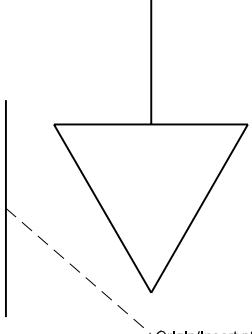
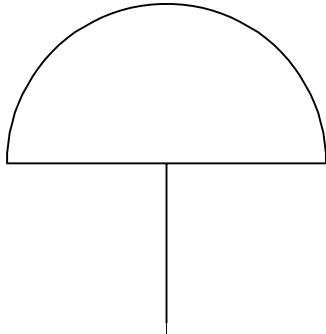
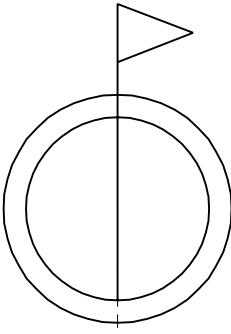
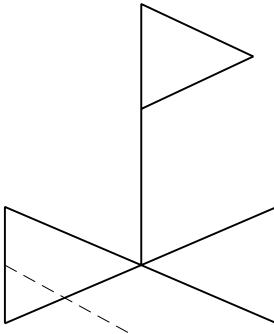
		
Plumbing:ISOUR1 ISO WALL MOUNTED URINAL Element type: Symbol	Plumbing:ISOWC1 ISO FLOOR MOUNTED WC Element type: Symbol	Plumbing:ISOWC2 ISO WALL MOUNTED WC Element type: Symbol
		
Plumbing:LOOPL LEFT DIMENSION LOOP Element type: Symbol	Plumbing:LOOPR RIGHT DIMENSION LOOP Element type: Symbol	Plumbing:PLGBFL BULL PLUG FLANGED Element type: Symbol
		
Plumbing:PLGPSC PIPE PLUG Element type: Symbol	Plumbing:PRGGCO PRESSURE GAGE AND COCK Element type: Symbol	Plumbing:PUMP PUMP Element type: Symbol

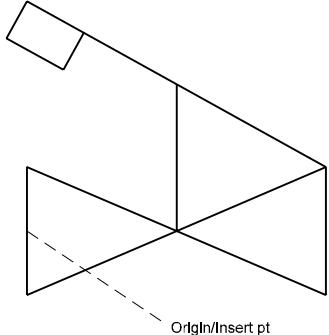
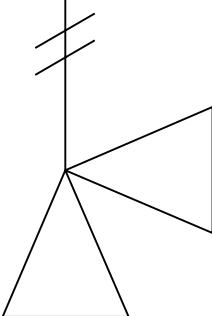
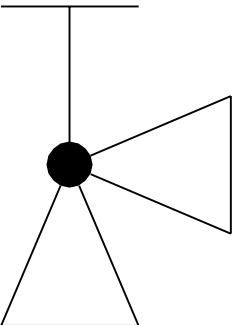
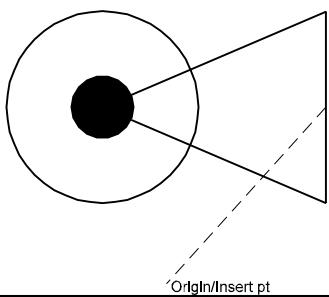
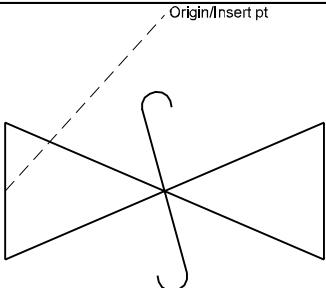
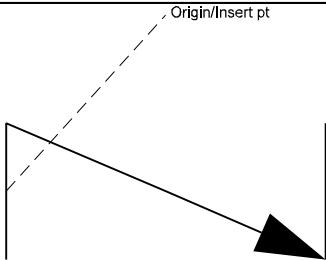
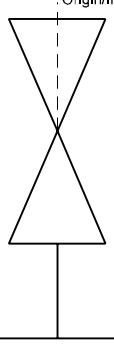
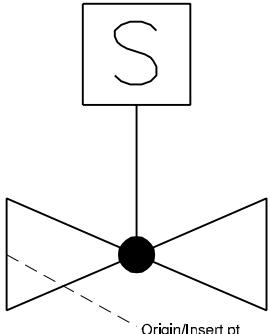
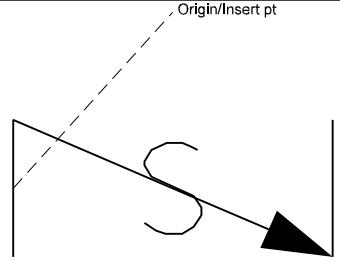
		
Plumbing:PUMPP PUMP SCHEMATIC Element type: Symbol	Plumbing:PUMPS INLINE PUMP Element type: Symbol	Plumbing:SLEEVE SLEEVE Element type: Symbol
		
Plumbing:STGLAS SIGHT GLASS Element type: Symbol	Plumbing:STRAIN STRAINER Element type: Symbol	Plumbing:STRBLO BLOW OFF STRAINER Element type: Symbol
		
Plumbing:TDSSC DOUBLE SWEEP TEE Element type: Symbol	Plumbing:THERM THERMOMETER Element type: Symbol	Plumbing:TRAPST STEAM TRAP Element type: Symbol

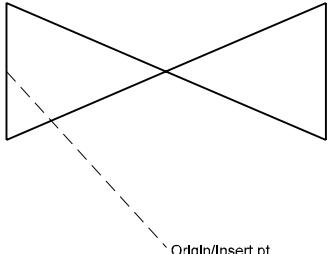
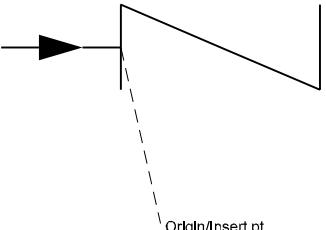
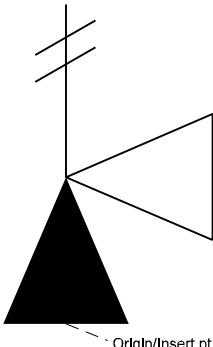
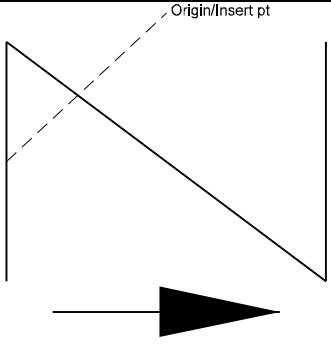
		
Plumbing:TSODSC TEE SIDE OUTLET DOWN Element type: Symbol	Plumbing:TSOUSC TEE SIDE OUTLET UP Element type: Symbol	Plumbing:TSSSC TEE Element type: Symbol
		
Plumbing:TSSWSC SINGLE SWEEP TEE Element type: Symbol	Plumbing:UNIOSC UNION Element type: Symbol	Plumbing:VA3WAM 3WAY AIRMOTOR CONTROLER Element type: Symbol
		
Plumbing:VA3WEM 3WAY ELECMOTOR CONTRLE Element type: Symbol	Plumbing:VA3WM 3 WAY MANUAL VALVE Element type: Symbol	Plumbing:VAAHOS ANGLE HOSE VALVE Element type: Symbol

		
Plumbing:VABALL BALL VALVE PLAN Element type: Symbol	Plumbing:VABFLY BUTTERFLY VALVE Element type: Symbol	Plumbing:VACWR CONDENSATE REGULATOR VALVE Element type: Symbol
		
Plumbing:VADISC DIAPHRAGM VALVE Element type: Symbol	Plumbing:VAEMTR PNEUMATIC MOTOR Element type: Symbol	Plumbing:VAESOL SOLENOID VALVE ACTUATOR Element type: Symbol
		
Plumbing:VAGAMC PNEUMATIC CTRL'D GATE VALVE Element type: Symbol	Plumbing:VAGLAM PNEUMATIC CTRL'D GLOBE VLV Element type: Symbol	Plumbing:VAGLE ANGLE GLOBE VALVE Element type: Symbol

		
Plumbing:VAGLSE GLOBE VALVE Element type: Symbol	Plumbing:VAGSE ANGLE GATE VALVE Element type: Symbol	Plumbing:VAGSP ANGLE GATE VALVE PLAN Element type: Symbol
		
Plumbing:VAGTSE GATE VALVE Element type: Symbol	Plumbing:VAHASC GATE VALVE PLAN Element type: Symbol	Plumbing:VAHGLS HOSE GLOBE VALVE Element type: Symbol
		
Plumbing:VAHGSC HOSE GATE VALVE Element type: Symbol	Plumbing:VALSSC LOCK SHIELD VALVE Element type: Symbol	Plumbing:VAMAGS MAGNETIC STOP VALVE Element type: Symbol

	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VAMNNS VLV ACTUA MAN NONRISINGSTEM Element type: Symbol	Plumbing:VAMOGS MOTOR OPERATD GATE VALVE Element type: Symbol	Plumbing:VAMOLS MOTOR OPERATD GLOBE VALVE Element type: Symbol
	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VAMOSY VLV ACTTOR MAN OUTSTEM Element type: Symbol	Plumbing:VANEEED NEEDLE VALVE Element type: Symbol	Plumbing:VAPLUG PLUG VALVE Element type: Symbol
	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VAPMTD VALVE ACTUATOR PNEUMOT Element type: Symbol	Plumbing:VAPRED PRESSURE REDUCING VALVE Element type: Symbol	Plumbing:VAPRRD PRESSURE REDUCING VALVE Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VAQOSC QUICK OPENING VALVE Element type: Symbol	Plumbing:VARELF RELIEF OR SAFETY VALVE Element type: Symbol	Plumbing:VASCE ANGLE GLOBE VALVE Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VASCP ANGLE GLOBE VALVE PLAN Element type: Symbol	Plumbing:VASFSC SAFETY VALVE Element type: Symbol	Plumbing:VASGCH SWING GATE CHECK VALVE Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Plumbing:VASNAP SNAP ACTION VALVE Element type: Symbol	Plumbing:VASOLN SOLENOID VALVE Element type: Symbol	Plumbing:VASPCH SPRING CHECK VALVE Element type: Symbol

		
Plumbing:VASTSC GATE VALVE Element type: Symbol	Plumbing:VASWSC STRAIGHT WAY CHECK VALVE Element type: Symbol	Plumbing:VATPR TEMP PRESSURE RELIEF VALVE Element type: Symbol
		
Plumbing:VLVCHK CHECK VALVE Element type: Symbol		

12 Mechanical Lines Library

	— A C I D —	— A T V —	— B B D —
Mechanical: ACIDWS ACID WASTE Element type: Line	Mechanical: AIRRLF ATMOSPHERIC VENT Element type: Line	Mechanical: BOILBD BOILER BLOW DOWN Element type: Line	
— B R —	— B —	— C D —	
Mechanical: BRINER BRINE RETURN Element type: Line	Mechanical: BRINES BRINE SUPPLY Element type: Line	Mechanical: CDRNAF CONDENSATE DRAIN Element type: Line	
— A —	— P C —	— C R —	
Mechanical: CMPAIR COMPRESSED AIR Element type: Line	Mechanical: CONDP PUMPED CONDENSATE Element type: Line	Mechanical: CONDWR CONDENSER WATER RETURN Element type: Line	

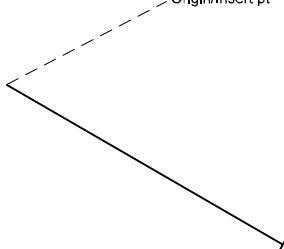
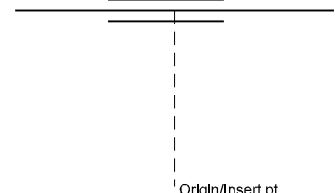
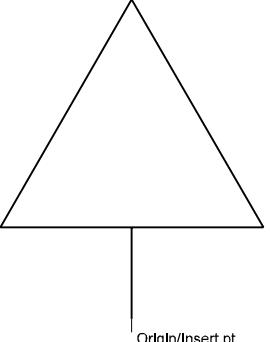
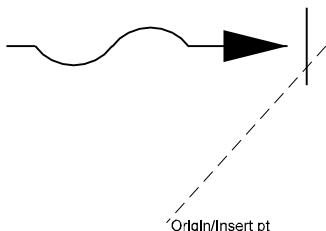
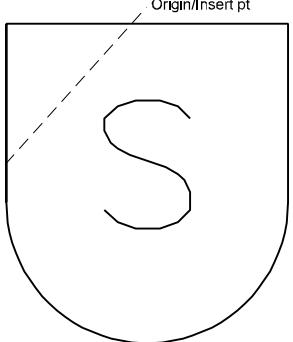
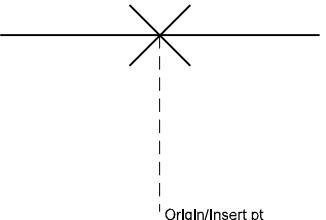
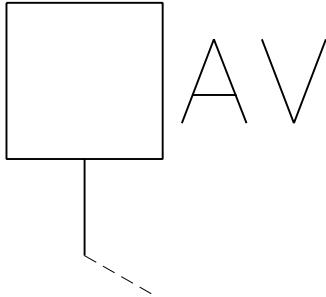
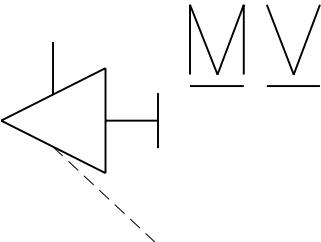
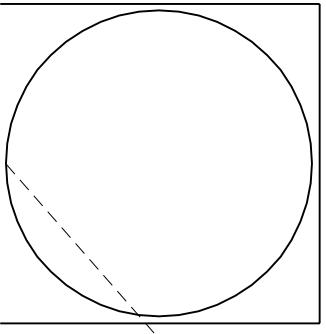
_____ C _____	_____ C W R _____	_____ C W S _____
Mechanical: CONDWS CONDENSER WATER SUPPLY Element type: Line	Mechanical: CWR CHILLED WATER RETURN Element type: Line	Mechanical: CWS CHILLED WATER SUPPLY Element type: Line
_____ H C R _____	_____ H C S _____	_____ F I L L _____
Mechanical: DTR DUAL TEMPERATURE RETURN Element type: Line	Mechanical: DTS DUAL TEMPERATURE SUPPLY Element type: Line	Mechanical: FILL FILL LINE Element type: Line
_____ G H R _____	_____ G H S _____	_____ H P C _____
Mechanical: GHR GLYCOL HEATING RETURN Element type: Line	Mechanical: GHS GLYCOL HEATING SUPPLY Element type: Line	Mechanical: HPCNDR HIGH PRESSURE CONDENSATE Element type: Line

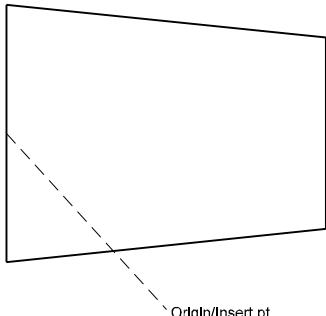
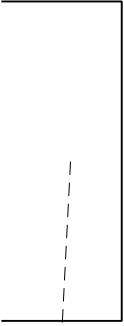
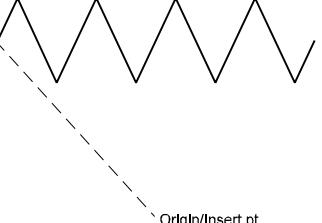
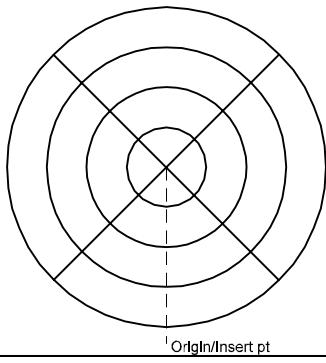
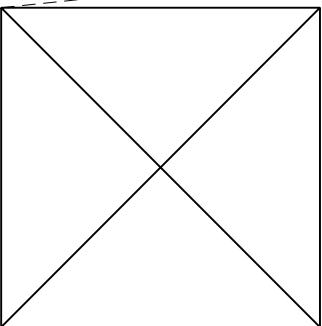
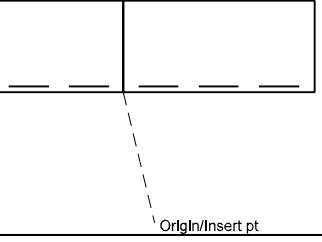
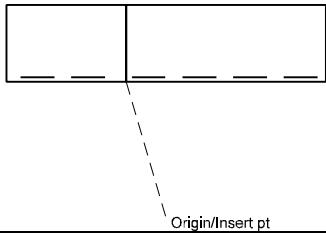
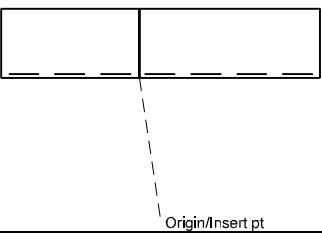
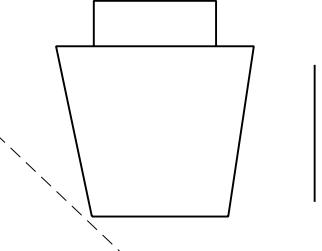
— H T W R —	— H T W S —	— H —
Mechanical: HTHWR HIGH TEMP HOT WATER RETURN Element type: Line	Mechanical: HTHWS HIGH TEMP HOT WATER SUPPLY Element type: Line	Mechanical: HUMID HUMIDIFICATION LINE Element type: Line
— H W R —	— H W S —	— I C W —
Mechanical: HWR LOW TEMP HOT WATER RETURN Element type: Line	Mechanical: HWS LOW TEMP HOT WATER SUPPLY Element type: Line	Mechanical: ICWTR INDUSTRIAL COLD WATER Element type: Line
— I H R —	— I H W —	— I W —
Mechanical: IHWTRR INDUSTRIAL HOT WATER RETURN Element type: Line	Mechanical: IHWTRS INDUSTRIAL HOT WATER SUPPLY Element type: Line	Mechanical: IWASTE INDUSTRIAL WASTE Element type: Line

— L P C —	— M U —	— M P C —
Mechanical:LPCNDR LOW PRESSURE CONDENSATE Element type: Line	Mechanical:MAKEUP MAKEUP WATER Element type: Line	Mechanical:MPCNDR MED PRESSURE CONDENSATE Element type: Line
— M T W R —	— M T W S —	— N P W —
Mechanical:MTHWR MED TEMP HOT WATER RETURN Element type: Line	Mechanical:MTHWS MED TEMP HOT WATER SUPPLY Element type: Line	Mechanical:NONPOT NONPOTABLE WATER Element type: Line
— P N —	— R L —	— R S —
Mechanical:PNTUBE PNEUMATIC TUBE RUNS Element type: Line	Mechanical:REFRL REFRIGERANT LIQUID Element type: Line	Mechanical:REFRS REFRIGERANT SUCTION Element type: Line

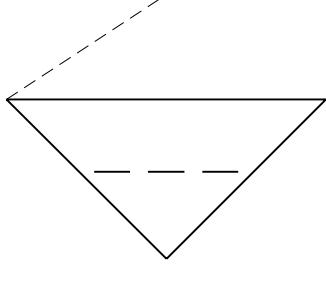
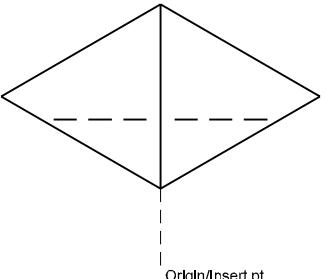
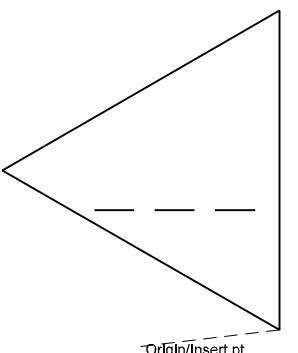
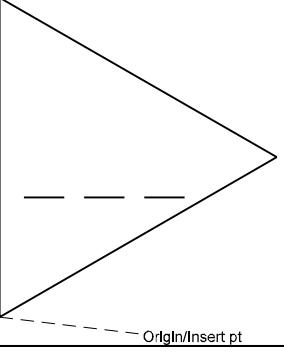
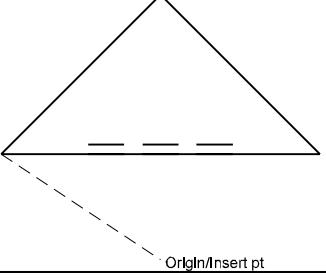
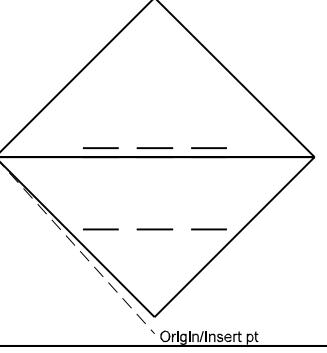
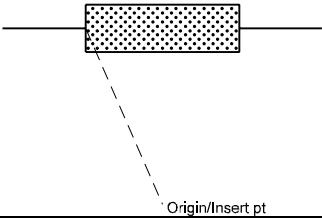
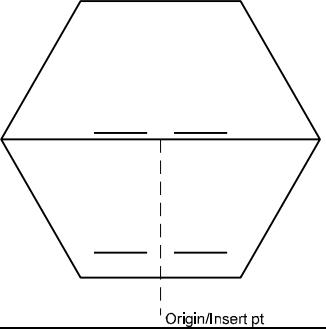
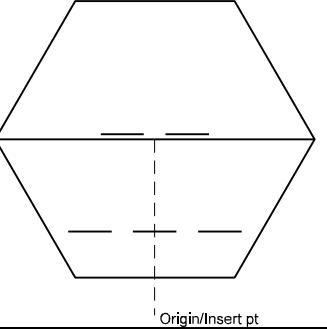
	— H P S —	— L P S —	— M P S —
Mechanical: STEAMH HIGH PRESSURE STEAM Element type: Line	Mechanical: STEAML LOW PRESSURE STEAM Element type: Line	Mechanical: STEAMM MED PRESSURE STEAM Element type: Line	
(((((((— V A C —	— V P D —	
Mechanical: TUVANE TURNING VANES Element type: Line	Mechanical: VACAIR VACUUM AIR Element type: Line	Mechanical: VACPD VACUUM PUMP DISCHARGE Element type: Line	

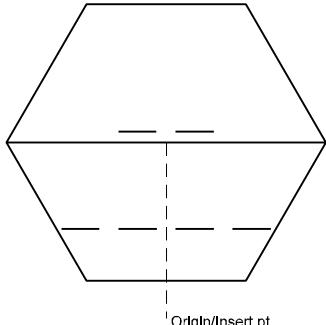
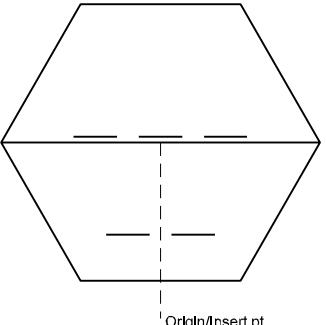
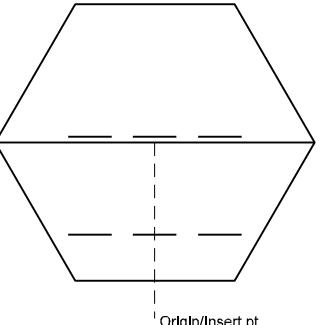
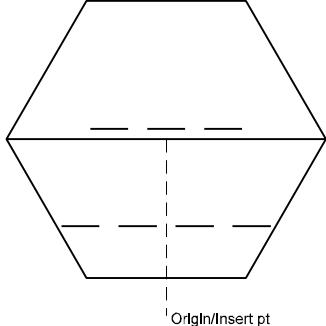
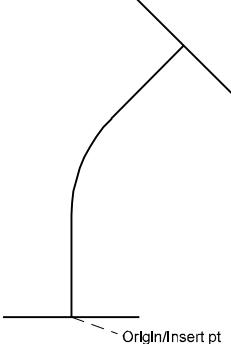
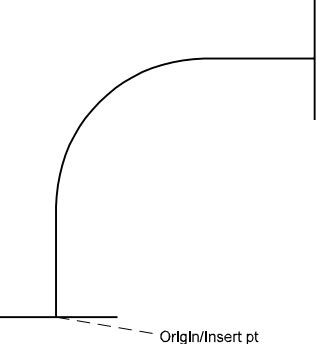
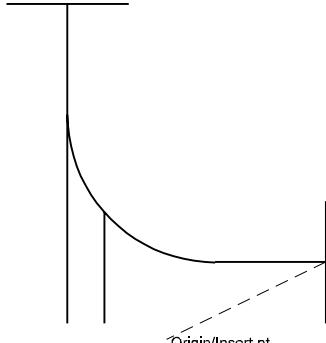
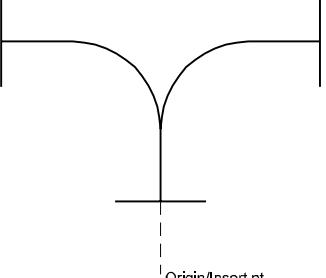
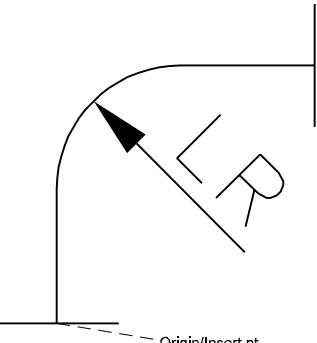
12 Mechanical Symbols Library

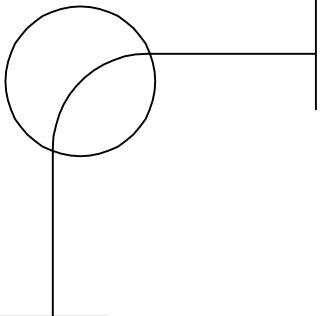
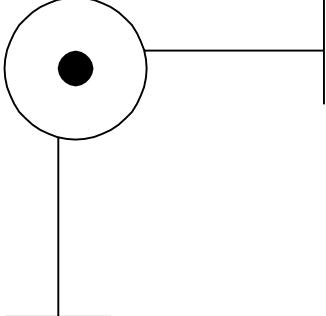
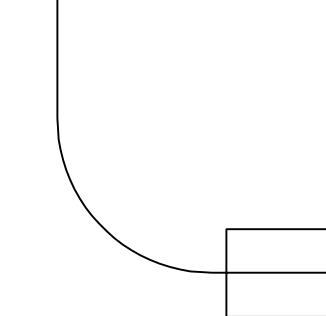
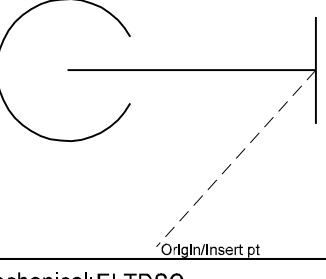
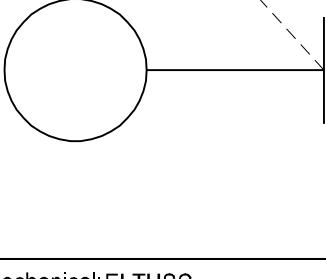
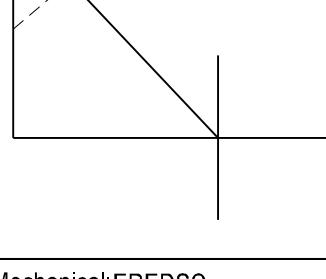
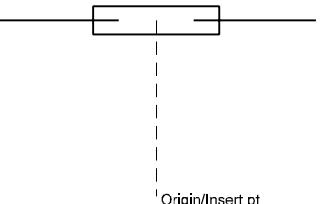
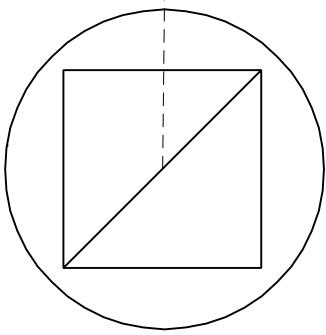
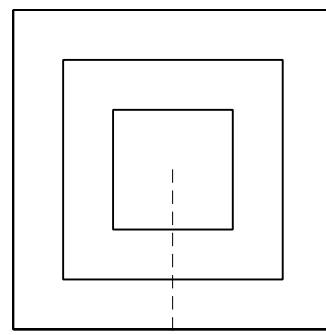
		
Mechanical:ACCDOR DUCT ACCESS DOOR Element type: Symbol	Mechanical:AGUIDE ALIGNMENT GUIDE Element type: Symbol	Mechanical:AIRELM AIR ELIMINATOR Element type: Symbol
		
Mechanical:AIRIN AIR IN Element type: Symbol	Mechanical:AIRSEP AIR SEPARATOR Element type: Symbol	Mechanical:ANCHRI ANCHOR Element type: Symbol
		
Mechanical:AVENTA AUTOMATIC AIR VENT Element type: Symbol	Mechanical:AVENTM MANUAL AIR VENT Element type: Symbol	Mechanical:BALLJT BALL JOINT Element type: Symbol

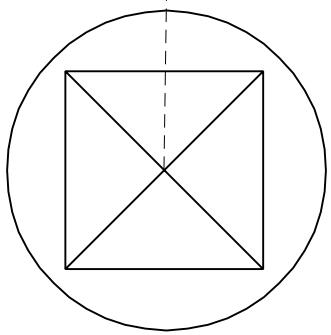
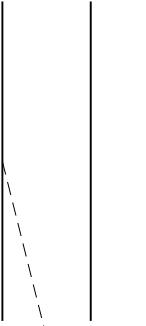
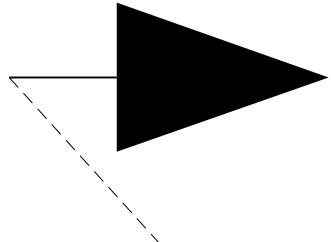
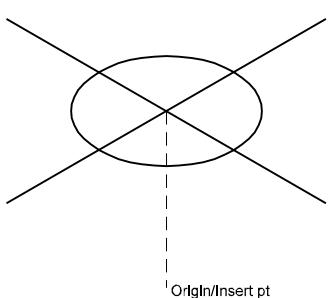
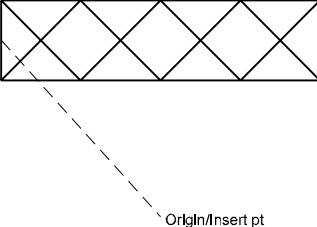
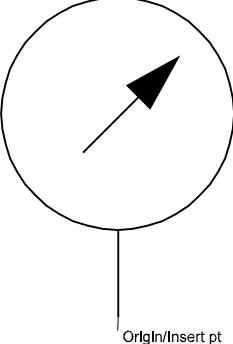
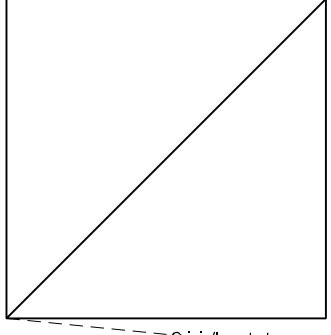
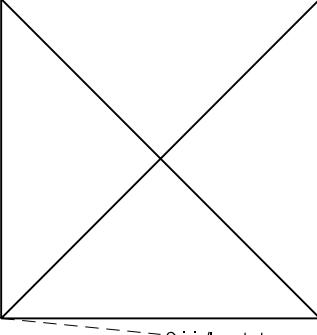
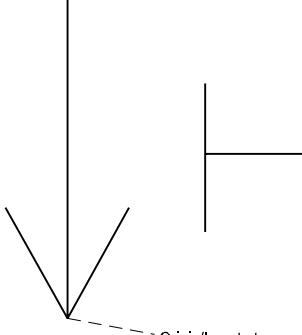
		
Mechanical: BUSHSC BUSHING Element type: Symbol	Mechanical: CAPSC CAP Element type: Symbol	Mechanical: CAPTUB CAPILLARY TUBE Element type: Symbol
		
Mechanical: CDRND ROUND CEILING DIFFUSER Element type: Symbol	Mechanical: CDSQR SQUARE CEILING DIFFUSER Element type: Symbol	Mechanical: CFM2X3 AIRFLOW CFM Element type: Symbol
		
Mechanical: CFM2X4 AIRFLOW CFM Element type: Symbol	Mechanical: CFM3X4 AIRFLOW CFM Element type: Symbol	Mechanical: COCKSC COCK Element type: Symbol

Mechanical: CREDSC REDUCER CONCENTRIC Element type: Symbol	Mechanical: CRSRSC CROSS Element type: Symbol	Mechanical: CUPJNT COUPLING JOINT Element type: Symbol
Mechanical: DCTHTR ELECTRIC DUCT HEATER Element type: Symbol	Mechanical: DMPEOC ELECT OPERATED DAMPER Element type: Symbol	Mechanical: DMPFIR FIRE DAMPER Element type: Symbol
Mechanical: DMPFS FIRE SMOKE DAMPER Element type: Symbol	Mechanical: DMPPOD PNEUMATIC DAMPER Element type: Symbol	Mechanical: DMPSMK SMOKE DAMPER Element type: Symbol

		
Mechanical:DPRSD DUCT PRESSURE CLASS DOWN Element type: Symbol	Mechanical:DPRSH DUCT PRESSURE HORIZONTAL Element type: Symbol	Mechanical:DPRSL DUCT PRESSURE LEFT Element type: Symbol
		
Mechanical:DPRSR DUCT PRESSURE RIGHT Element type: Symbol	Mechanical:DPRSU DUCT PRESSURE CLASS UP Element type: Symbol	Mechanical:DPRSV DUCT PRESSURE CLASS VERT Element type: Symbol
		
Mechanical:DRIER DRIER Element type: Symbol	Mechanical:EEQ2X2 ELEC. EQUIP 2X2 MARK Element type: Symbol	Mechanical:EEQ2X3 ELEC. EQUIP 2X3 MARK Element type: Symbol

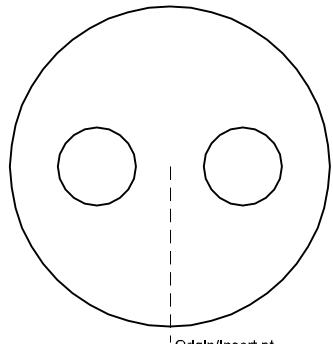
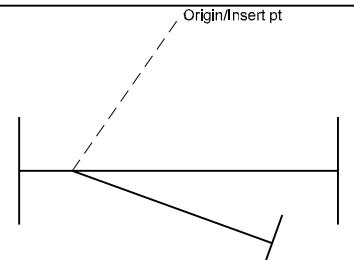
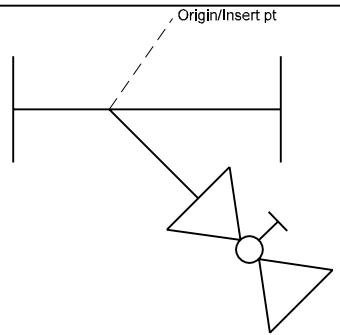
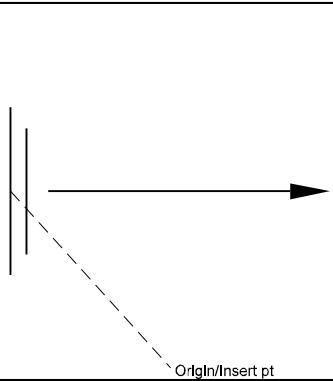
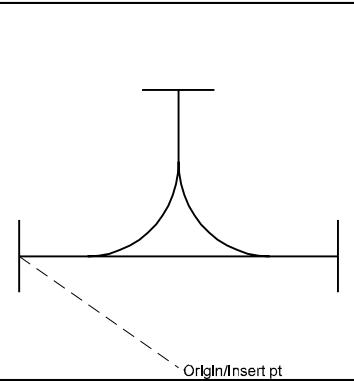
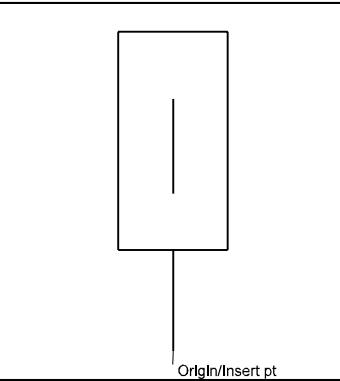
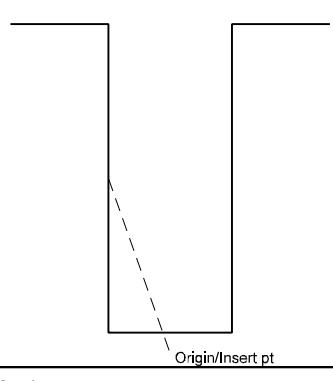
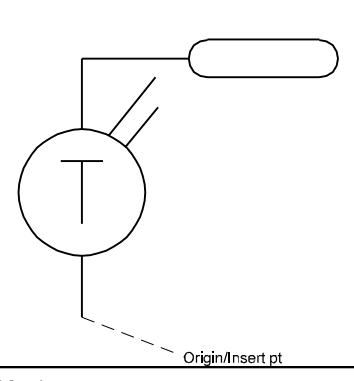
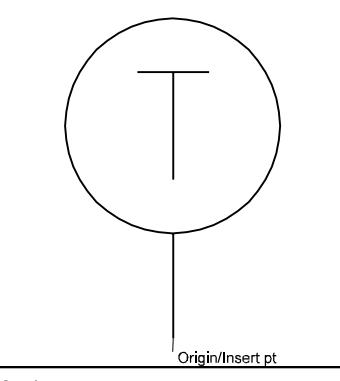
		
Mechanical: EEQ2X4 ELEC EQUIP 2X4 MARK Element type: Symbol	Mechanical: EEQ3X2 ELEC EQUIP 3X2 MARK Element type: Symbol	Mechanical: EEQ3X3 ELEC EQUIP 3X3 MARK Element type: Symbol
		
Mechanical: EEQ3X4 ELEC EQUIP 3X4 MARK Element type: Symbol	Mechanical: EL45SC 45 DEGREE ELBOW Element type: Symbol	Mechanical: EL90SC 90 DEGREE ELBOW Element type: Symbol
		
Mechanical: ELBSC BASE ELBOW Element type: Symbol	Mechanical: ELDBSC DOUBLE BRANCH ELBOW Element type: Symbol	Mechanical: ELLRSC LONG RADIUS ELBOW Element type: Symbol

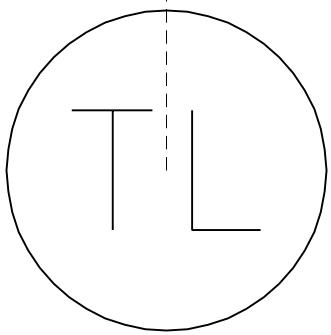
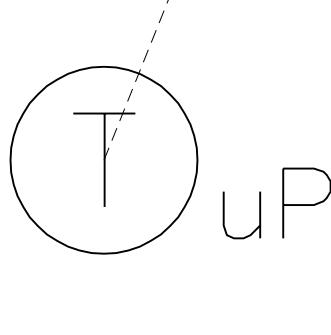
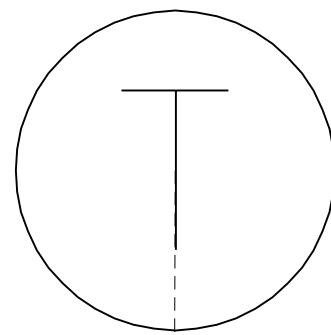
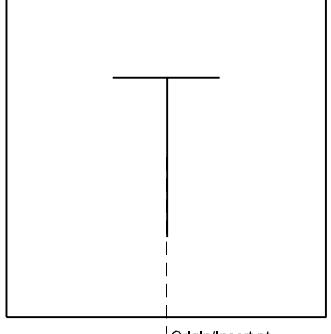
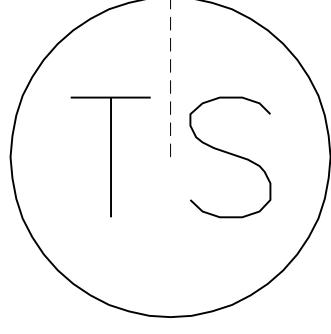
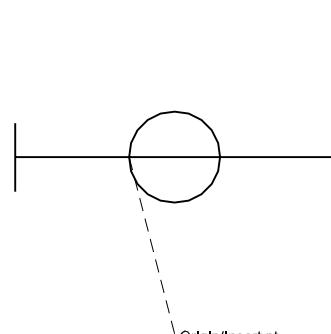
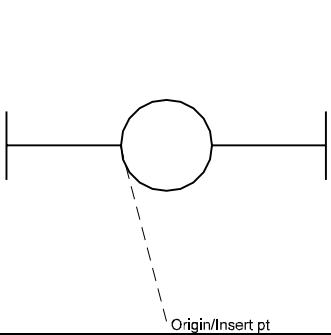
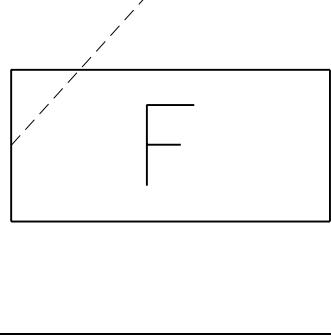
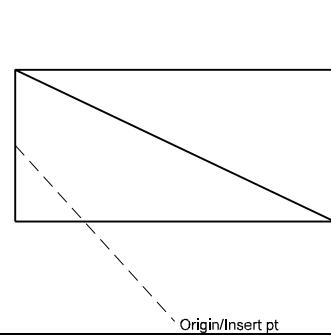
		
Mechanical: ELODSC ELBOW SIDE OUTLET DOWN Element type: Symbol	Mechanical: ELOUSC ELBOW SIDE OUTLET UP Element type: Symbol	Mechanical: ELSTRT STREET ELBOW Element type: Symbol
		
Mechanical: ELTDSC TURNED DOWN ELBOW Element type: Symbol	Mechanical: ELTUSC TURNED UP ELBOW Element type: Symbol	Mechanical: EREDSC ECCENTRIC REDUCER Element type: Symbol
		
Mechanical: EXPJNT EXPANSION JOINT Element type: Symbol	Mechanical: FANERV EXHAUST ROOF VENT FAN Element type: Symbol	Mechanical: FANLRV LOUVERED ROOF VENT FAN Element type: Symbol

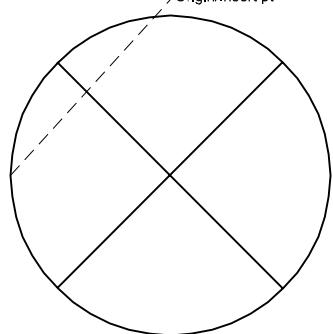
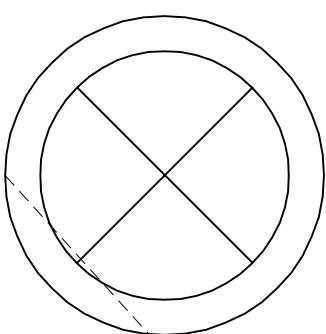
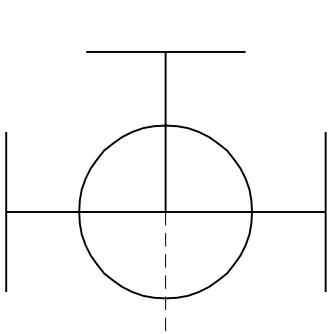
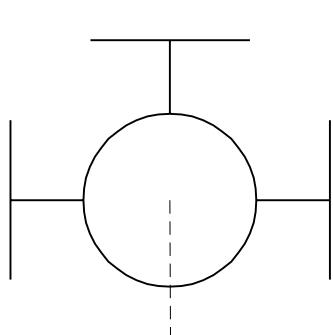
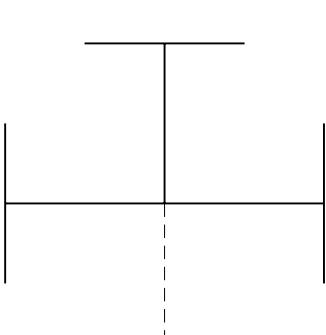
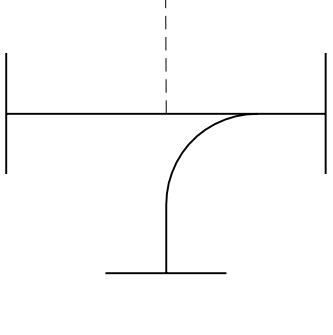
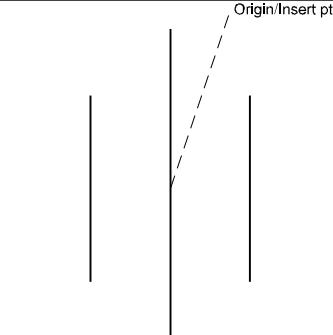
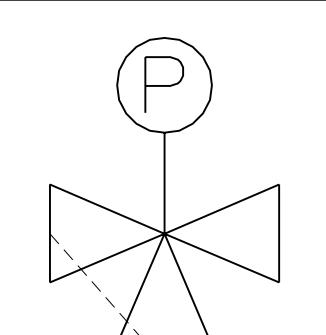
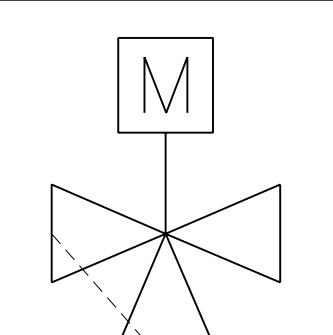
		
Mechanical:FANSRV INTAKE ROOF VENT FAN Element type: Symbol	Mechanical:FLBLND BLIND FLANGE Element type: Symbol	Mechanical:FLOW1 AIR FLOW DIRECTION ARROW Element type: Symbol
		
Mechanical:FLRPEN FLOOR PENETRATION ISO Element type: Symbol	Mechanical:FLXCON FLEXIBLE CONNECTOR Element type: Symbol	Mechanical:GAUGE GAUGE Element type: Symbol
		
Mechanical:GRILEX EXHAUST GRILLE Element type: Symbol	Mechanical:GRILSU SUPPLY GRILLE Element type: Symbol	Mechanical:HANGRD HANGER ROD Element type: Symbol

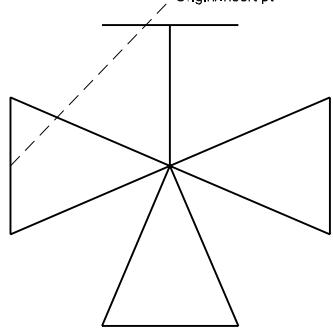
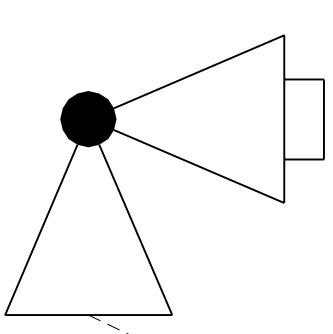
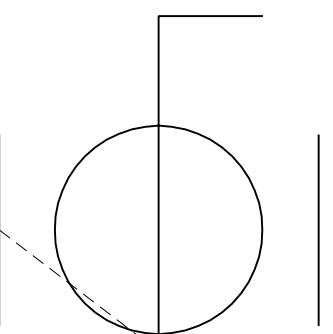
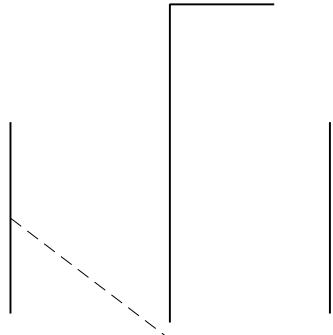
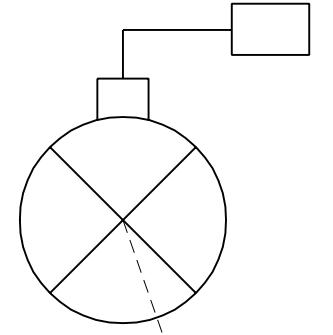
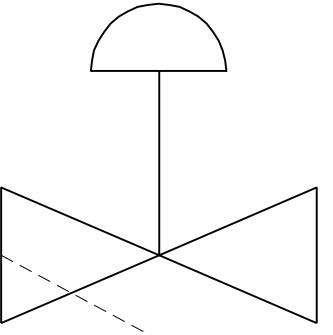
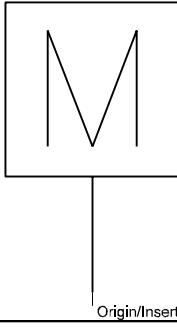
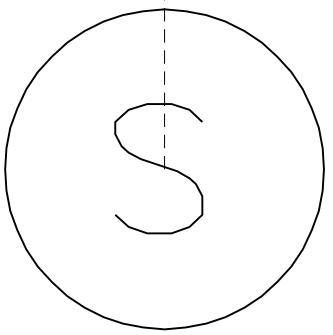
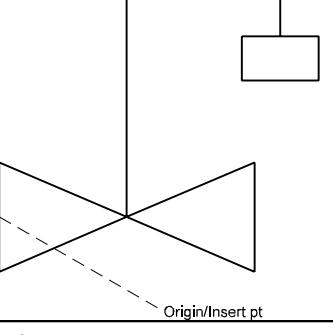
Mechanical:HANGSP HANGER SPRING Element type: Symbol	Mechanical:HSENS HUMIDITY SENSOR Element type: Symbol	Mechanical:HSTAT HUMIDISTAT Element type: Symbol
Mechanical:LNDIFF LINEAR DIFFUSER Element type: Symbol	Mechanical:LOOPL LEFT DIMENSION LOOP Element type: Symbol	Mechanical:LOOPR RIGHT DIMENSION LOOP Element type: Symbol
Mechanical:LOUOPN DOOR OR WALL LOUVER Element type: Symbol	Mechanical:PIDROP PITCH OR PIPE DROP Element type: Symbol	Mechanical:PIRISE PITCH OR PIPE RISE Element type: Symbol

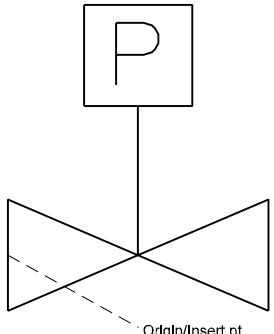
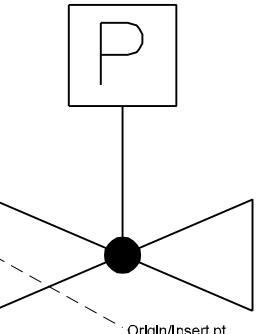
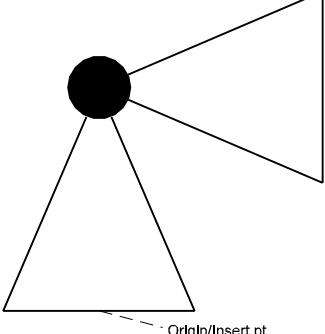
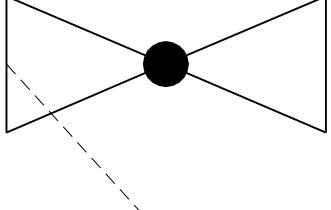
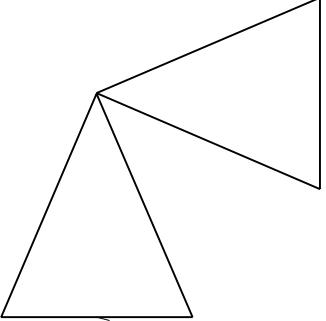
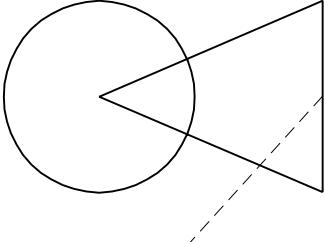
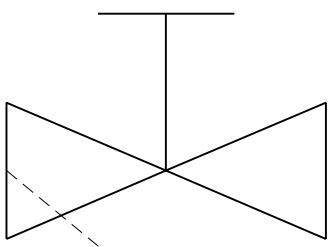
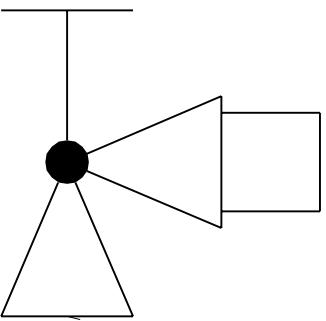
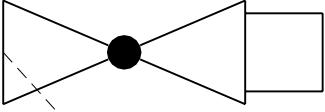
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
Mechanical: PLGBFL BULL PLUG FLANGED Element type: Symbol	Mechanical: PLGPSC PIPE PLUG Element type: Symbol	Mechanical: PRGGCO PRESSURE GAGE AND COCK Element type: Symbol
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
Mechanical: PSDIFF PUMP SUCTION DIFFUSER Element type: Symbol	Mechanical: PUMP PUMP Element type: Symbol	Mechanical: PUMPP PUMP SCHEMATIC Element type: Symbol
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
Mechanical: PUMPS INLINE PUMP Element type: Symbol	Mechanical: SCALET SCALE TRAP Element type: Symbol	Mechanical: SLEEVE SLEEVE Element type: Symbol

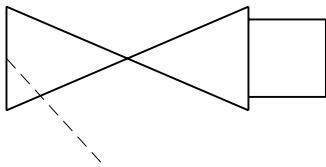
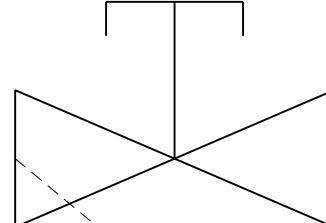
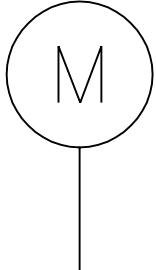
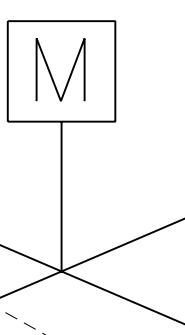
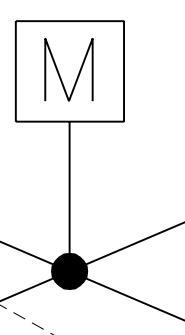
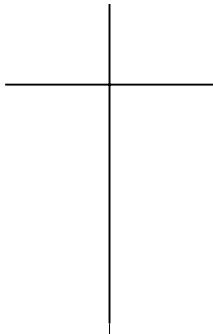
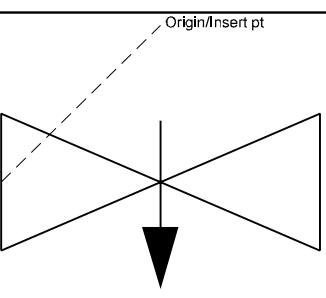
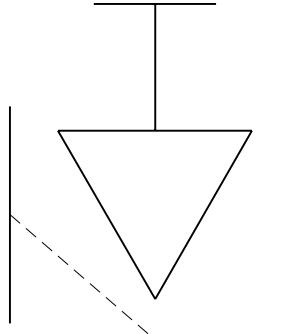
		
Mechanical: STGLAS SIGHT GLASS Element type: Symbol	Mechanical: STRAIN STRAINER Element type: Symbol	Mechanical: STRBLO BLOW OFF STRAINER Element type: Symbol
		
Mechanical: SUPOUT SUPPLY OUTLET WALL SUPPLY Element type: Symbol	Mechanical: TDSSC DOUBLE SWEEP TEE Element type: Symbol	Mechanical: THERM THERMOMETER Element type: Symbol
		
Mechanical: THERMW THERMOMETER WELL Element type: Symbol	Mechanical: THHRB THERMOSTAT REMOTE BULB Element type: Symbol	Mechanical: THHSC THERMOSTAT SELFCONTAINED Element type: Symbol

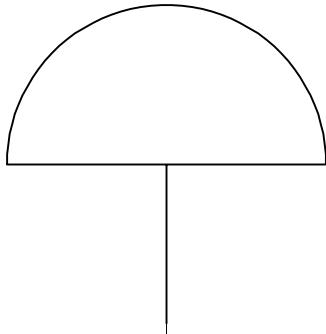
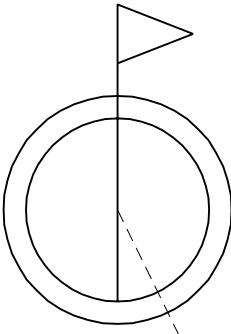
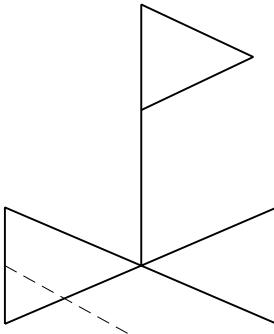
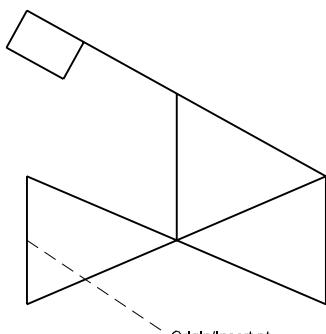
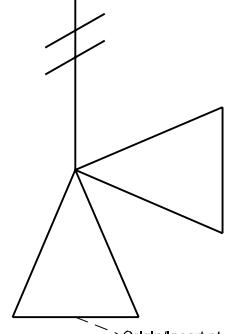
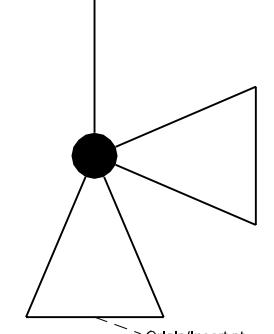
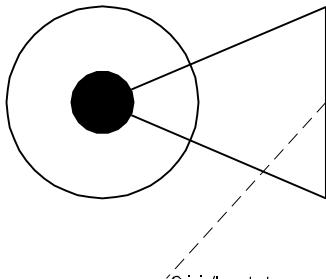
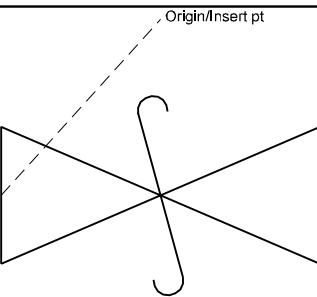
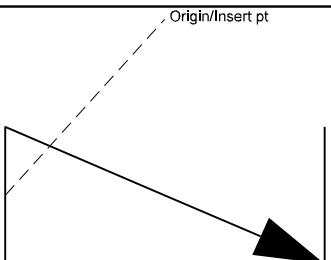
		
Mechanical: THLPRS THERMOSTAT LOW PRESSURE Element type: Symbol	Mechanical: THMCP MICROPROCESSOR THERMOSTAT Element type: Symbol	Mechanical: THPELE THERMOSTAT ELECTRIC Element type: Symbol
		
Mechanical: THPPNE THERMOSTAT PNEUMATIC PIPE Element type: Symbol	Mechanical: TMPSEN TEMPERATURE SENSOR Element type: Symbol	Mechanical: TODSC TEE OUTLET DOWN Element type: Symbol
		
Mechanical: TOUSC TEE OUTLET UP Element type: Symbol	Mechanical: TRAPFL FLOAT TRAP Element type: Symbol	Mechanical: TRAPFT FLOAT THERMOSTATIC TRAP Element type: Symbol

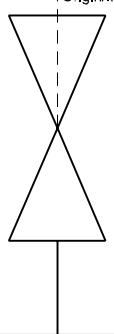
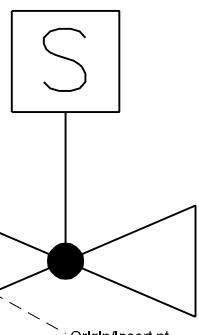
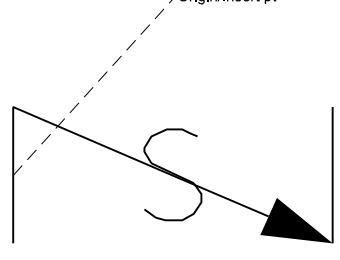
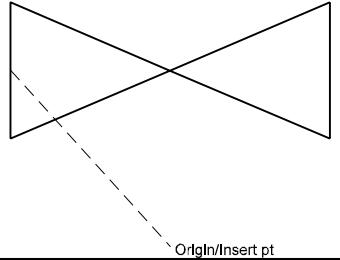
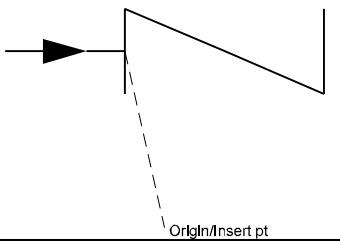
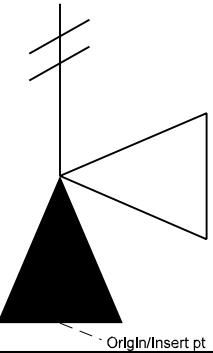
		
Mechanical: TRAPST STEAM TRAP Element type: Symbol	Mechanical: TRAPTB THERMOSTATIC BLAST TRAP Element type: Symbol	Mechanical: TSODSC TEE SIDE OUTLET DOWN Element type: Symbol
		
Mechanical: TSOUSC TEE SIDE OUTLET UP Element type: Symbol	Mechanical: TSSSC TEE Element type: Symbol	Mechanical: TSSWSC SINGLE SWEEP TEE Element type: Symbol
		
Mechanical: UNIOSC UNION Element type: Symbol	Mechanical: VA3WAM 3WAY AIMOTOR CONTROLER Element type: Symbol	Mechanical: VA3WEM 3WAY ELECMOTOR CONTRLE Element type: Symbol

 Mechanical: VA3WM 3 WAY MANUAL VALVE Element type: Symbol	 Mechanical: VAAHOS ANGLE HOSE VALVE Element type: Symbol	 Mechanical: VABALL BALL VALVE PLAN Element type: Symbol
 Mechanical: VABFLY BUTTERFLY VALVE Element type: Symbol	 Mechanical: VACWR CONDENSWATER REGULATVALVE Element type: Symbol	 Mechanical: VADISC DIAPHRAGM VALVE Element type: Symbol
 Mechanical: VAEMTR PNEUMATIC MOTOR Element type: Symbol	 Mechanical: VAESOL SOLENOID VALVE ACTUATOR Element type: Symbol	 Mechanical: VAFLSC FLOAT VALVE Element type: Symbol

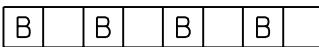
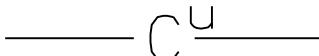
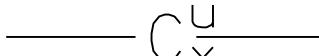
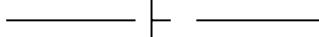
 <p>Origin/Insert pt</p> <p>Mechanical: VAGAMC PNEUMATIC CTRL'D GATE VALVE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAGLAM PNEUMATIC CTRL'D GLOBE VLV Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAGLE ANGLE GLOBE VALVE Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Mechanical: VAGLSE GLOBE VALVE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAGSE ANGLE GATE VALVE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAGSP ANGLE GATE VALVE PLAN Element type: Symbol</p>
 <p>Origin/Insert pt</p> <p>Mechanical: VAGTSE GATE VALVE Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAHASC GATE VALVE PLAN Element type: Symbol</p>	 <p>Origin/Insert pt</p> <p>Mechanical: VAHGLS HOSE GLOBE VALVE Element type: Symbol</p>

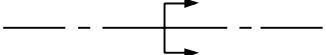
		
Mechanical: VAHGSC HOSE GATE VALVE Element type: Symbol	Mechanical: VALSSC LOCK SHIELD VALVE Element type: Symbol	Mechanical: VAMAGS MAGNETIC STOP VALVE Element type: Symbol
		
Mechanical: VAMNNS VLV ACTUA MAN NONRISINGSTEM Element type: Symbol	Mechanical: VAMOGS MOTOR OPERATD GATE VALVE Element type: Symbol	Mechanical: VAMOLS MOTOR OPERATD GLOBE VALVE Element type: Symbol
		
Mechanical: VAMOSY VLV ACTTOR MAN OUTSTEM Element type: Symbol	Mechanical: VANEED NEEDLE VALVE Element type: Symbol	Mechanical: VAPLUG PLUG VALVE Element type: Symbol

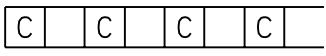
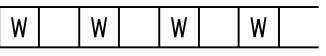
		
Mechanical: VAPMTD VALVE ACTUATOR PNEUMOT Element type: Symbol	Mechanical: VAPRED PRESSURE REDUCING VALVE Element type: Symbol	Mechanical: VAPRRD PRESSURE REDUCING VALVE Element type: Symbol
		
Mechanical: VAQOSC QUICK OPENING VALVE Element type: Symbol	Mechanical: VARELF RELIEF OR SAFETY VALVE Element type: Symbol	Mechanical: VASCE ANGLE GLOBE VALVE ELEVATION Element type: Symbol
		
Mechanical: VASCP ANGLE GLOBE VALVE PLAN Element type: Symbol	Mechanical: VASFSC SAFETY VALVE Element type: Symbol	Mechanical: VASGCH SWING GATE CHECK VALVE Element type: Symbol

		
Mechanical: VASNAP SNAP ACTION VALVE Element type: Symbol	Mechanical: VASOLN SOLENOID VALVE Element type: Symbol	Mechanical: VASPCH SPRING CHECK VALVE Element type: Symbol
		
Mechanical: VASTSC GATE VALVE Element type: Symbol	Mechanical: VASWSC STRAIGHT WAY CHECK VALVE Element type: Symbol	Mechanical: VATPR TEMP PRESSURE RELIEF VALVE Element type: Symbol

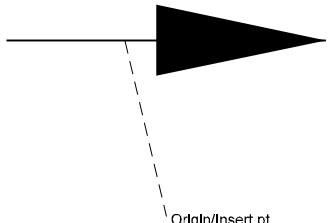
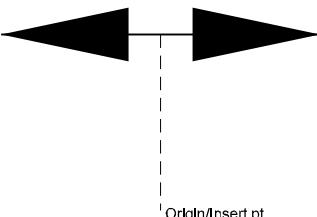
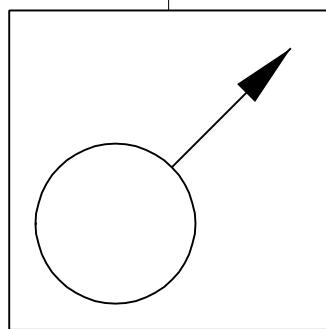
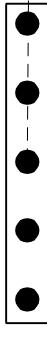
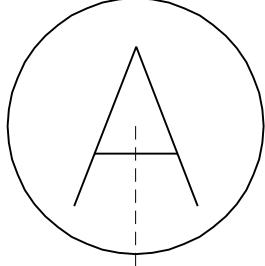
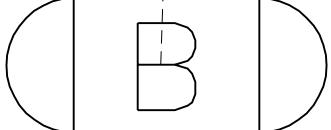
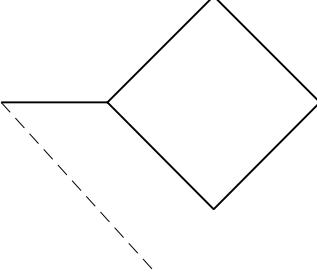
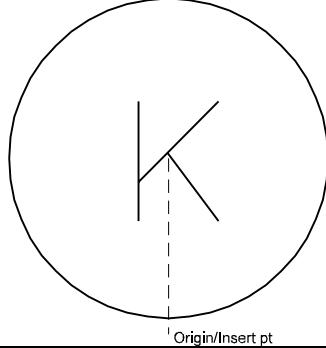
13 Electrical Lines Library

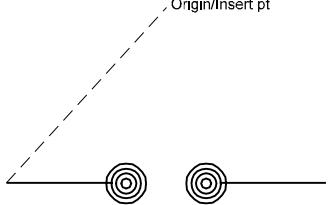
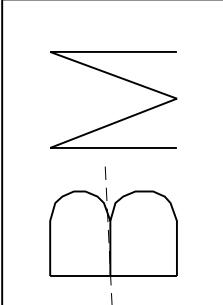
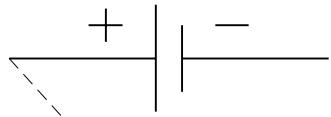
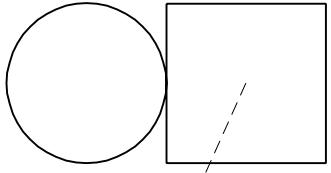
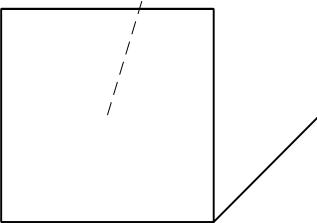
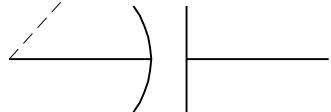
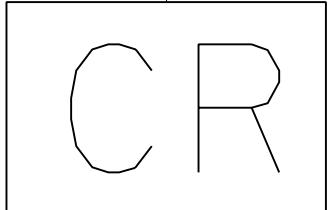
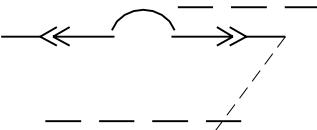
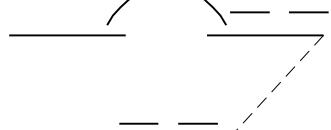
	 C T V	C
Electrical:BUSWAY BUSWAY Element type: Line	Electrical:CABLTV CABLE TV Element type: Line	Electrical:COMARN NEW COMMUNICATION AERIAL Element type: Line
		
Electrical:COMARX EXIST COMMUNICATION AERIAL Element type: Line	Electrical:COMUGN NEW COMMUNICATION UNDERG Element type: Line	Electrical:COMUGX EXIST COMMUNICATION UNDERG Element type: Line
		
Electrical:CONDFL FLEXIBLE CONDUIT Element type: Line	Electrical:DUCTTR TROLLEY DUCT Element type: Line	Electrical:EPARN NEW ELEC AERIAL PRIMARY Element type: Line

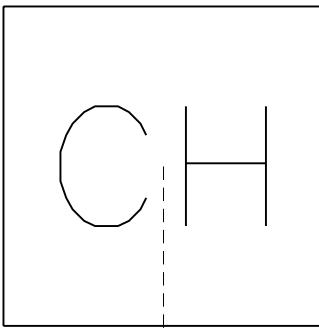
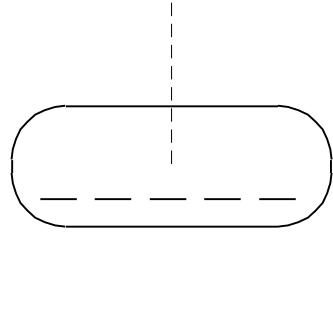
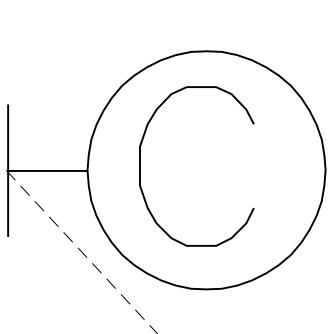
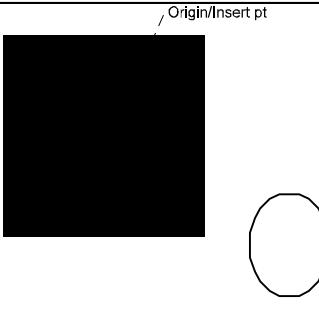
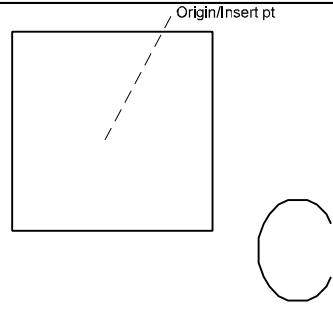
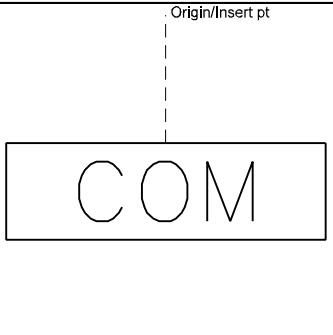
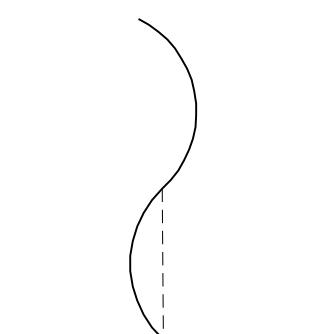
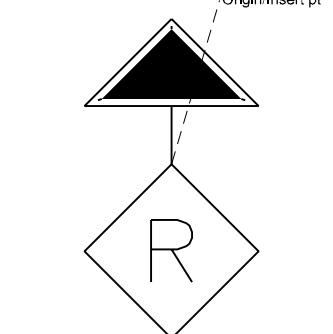
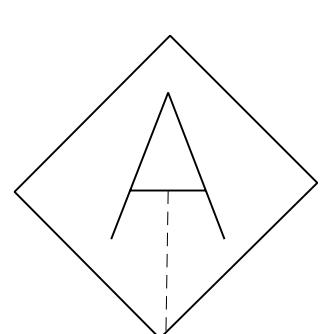
		
Electrical:EPARX EXIST ELEC AERIAL PRIMARY Element type: Line	Electrical:EPUGN NEW ELEC UNDERG PRIMARY Element type: Line	Electrical:EPUGX EXIST ELEC UNDERG PRIMARY Element type: Line
		
Electrical:ESARN NEW ELEC AERIAL SEC Element type: Line	Electrical:ESARX EXIST ELEC AERIAL SEC Element type: Line	Electrical:ESUGN NEW ELEC UNDERG SEC Element type: Line
		
Electrical:ESUGX EXIST ELEC UNDERG SEC Element type: Line	Electrical:EUDUCN NEW UNDERGROUND DUCT BANK Element type: Line	Electrical:EUDUCX EXIST UNDERGROUND DUCT BANK Element type: Line

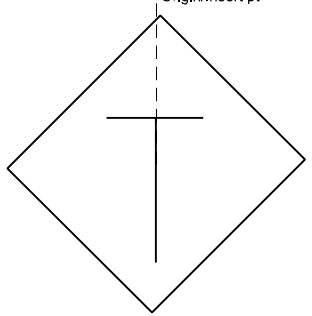
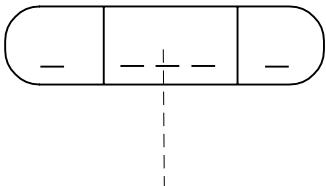
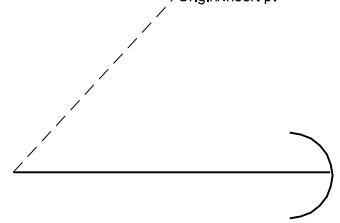
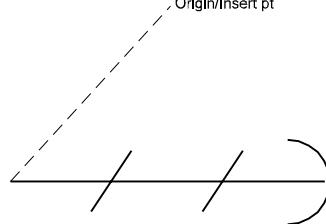
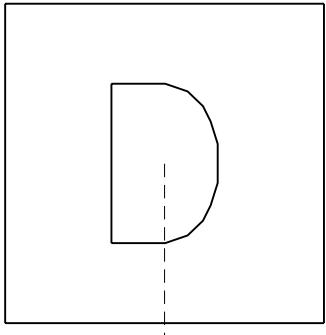
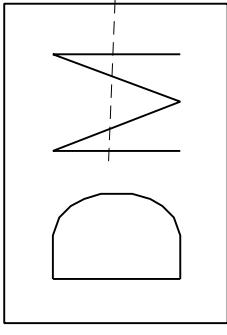
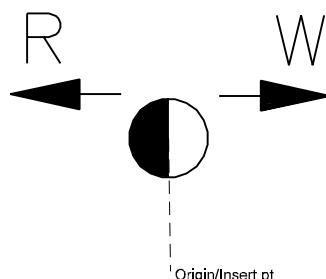
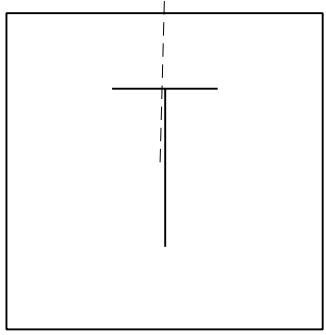
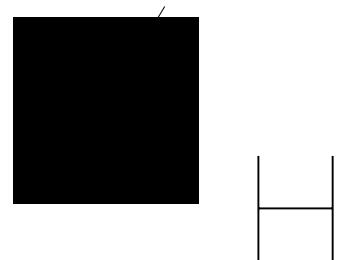
_____ F O _____		
Electrical:FIBOPT FIBER OPTICS LINE Element type: Line	Electrical:LADDER CABLE LADDER Element type: Line	Electrical:WIREWY WIREWAY Element type: Line

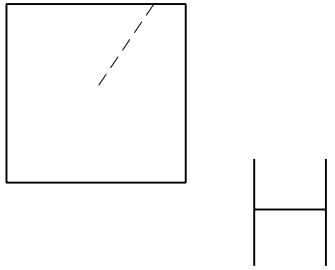
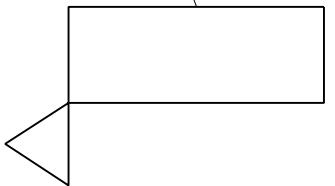
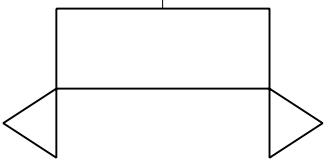
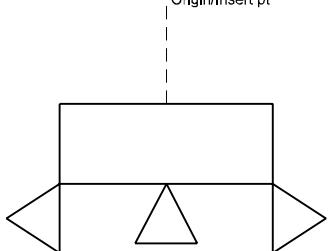
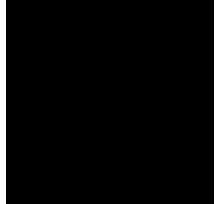
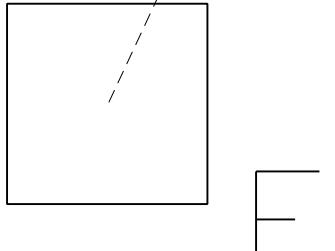
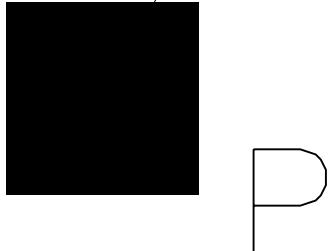
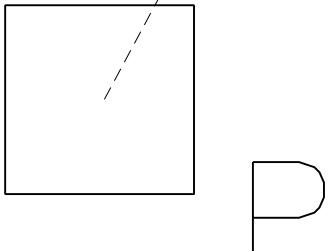
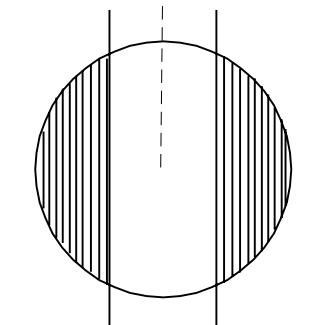
13 Electrical Symbols Library

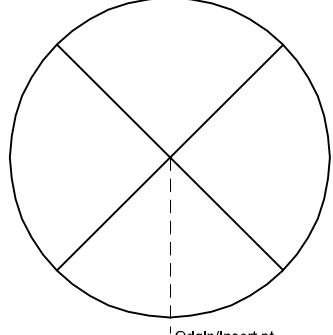
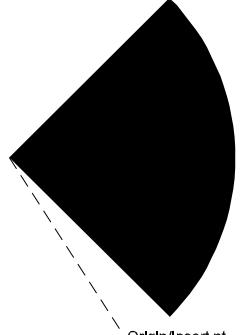
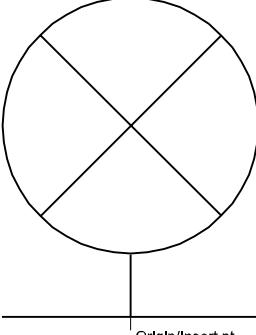
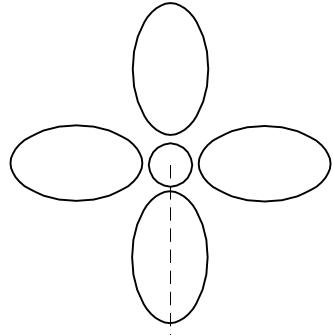
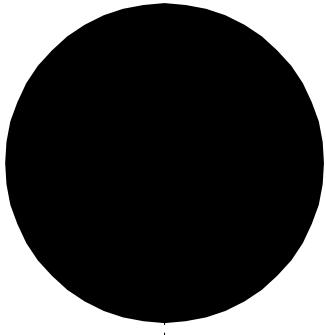
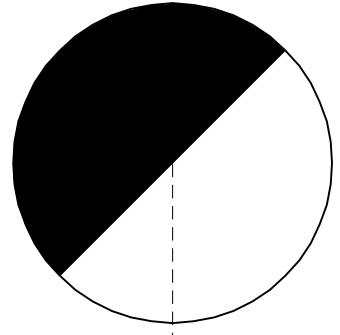
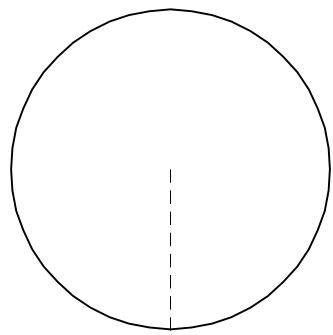
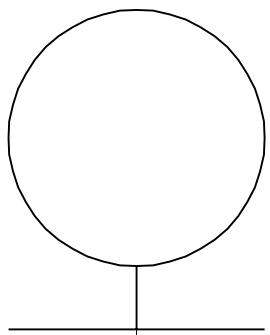
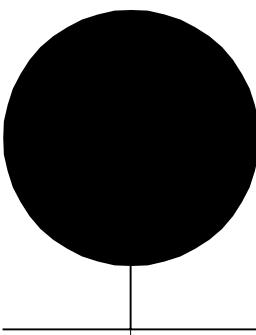
		
Electrical:1DIR DIRECTION ARROW Element type: Symbol	Electrical:2DIR DOUBLE DIRECTION ARROW Element type: Symbol	Electrical:ACCBIO BIOMETRIC ACCESS CONTROL Element type: Symbol
		
Electrical:ACLLEL APPROACH LIGHTBAR_ELEVATED Element type: Symbol	Electrical:ACLLSF APPROACH LIGHTBAR_SEMIFLUSH Element type: Symbol	Electrical:AERROD AERIAL ROD Element type: Symbol
		
Electrical:AFBCN AIRFIELD BEACON Element type: Symbol	Electrical:ANNUN ANNUNCIATOR Element type: Symbol	Electrical:ANNUNT LOCAL CNTRL ANNUNCIATION UNT Element type: Symbol

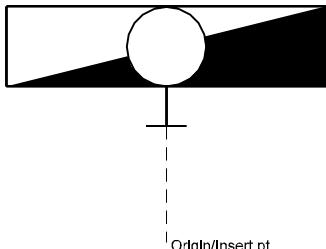
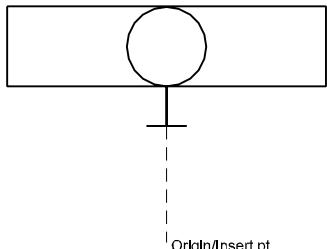
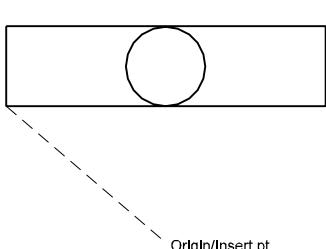
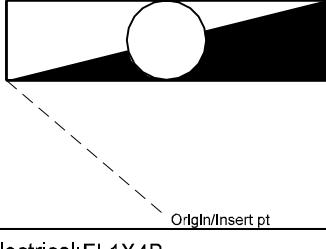
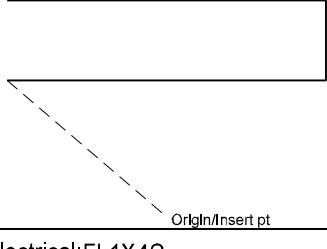
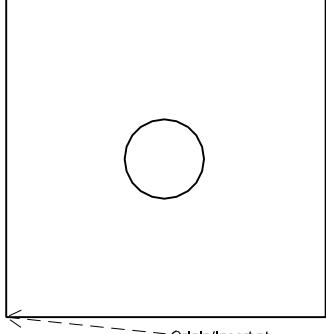
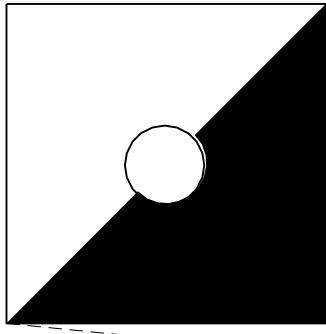
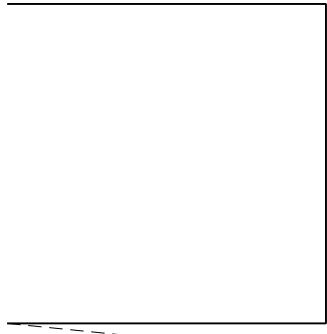
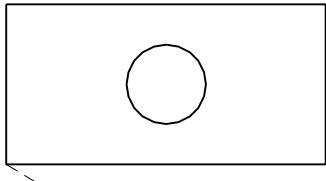
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Electrical:ARREST LIGHTNING ARRESTOR Element type: Symbol</p>	<p>Electrical:BARMKR BARRIER MARKER Element type: Symbol</p>	<p>Electrical:BATTRY BATTERY Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Electrical:BELL BELL Element type: Symbol</p>	<p>Electrical:BUZZER BUZZER Element type: Symbol</p>	<p>Electrical:CAPCTR CAPACITOR Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Electrical:CARDRD CARD READER Element type: Symbol</p>	<p>Electrical:CBDOUD DRAWOUT CIRCUIT BREAKER Element type: Symbol</p>	<p>Electrical:CBMCAS MOLDED CASE CKT BREAKER Element type: Symbol</p>

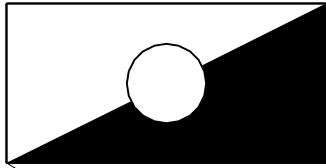
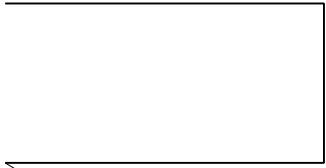
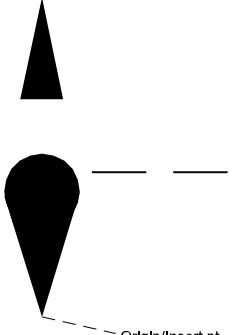
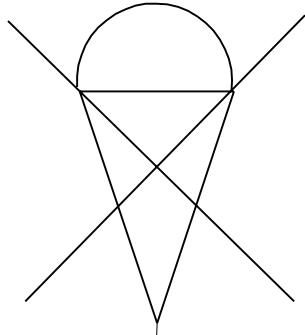
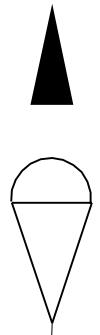
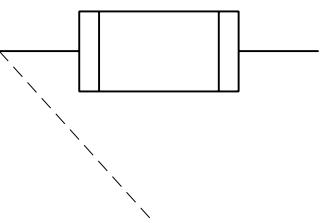
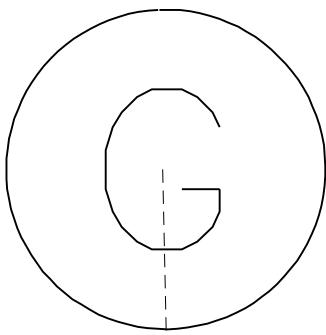
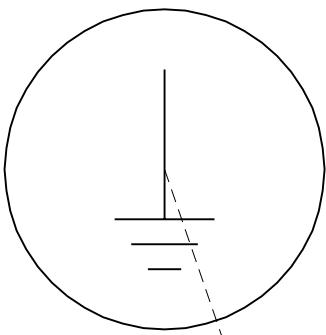
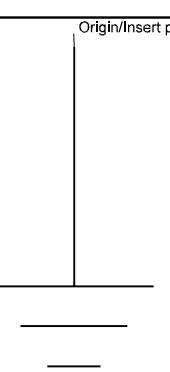
		
Electrical:CHIME CHIME Element type: Symbol	Electrical:CKTID CIRCUIT ID SYMBOL Element type: Symbol	Electrical:CLOCKW CLOCK OUTLET WALL MOUNTED Element type: Symbol
		
Electrical:CMHLN COMMO MANHOLE_NEW Element type: Symbol	Electrical:CMHLX COMMO MANHOLE_EXIST Element type: Symbol	Electrical:CMPLANL COMMUNICATION PANEL Element type: Symbol
		
Electrical:CPLTM CKT LINE TERMINATOR Element type: Symbol	Electrical:CPREC2 CP RECTIFIER Element type: Symbol	Electrical:CPSAN CP SACRIFICIAL ANODE Element type: Symbol

		
<p>Electrical:CPTEST CATHODIC PROTECT TEST STATION Element type: Symbol</p>	<p>Electrical:DBID DUCTBANK ID SYMBOL Element type: Symbol</p>	<p>Electrical:DGUYN DOWNGUY_NEW Element type: Symbol</p>
		
<p>Electrical:DGYR DOWNGUY_REMOVE Element type: Symbol</p>	<p>Electrical:DOROPN ELECTRIC DOOR OPENER Element type: Symbol</p>	<p>Electrical:DSTMKR RW DISTANCE MARKER Element type: Symbol</p>
		
<p>Electrical:DTHL DISPLACE THRESHOLD LIGHT Element type: Symbol</p>	<p>Electrical:DXFMR DRY TYPE TRANSFORMER Element type: Symbol</p>	<p>Electrical:EHHLN ELEC HANDHOLE_NEW Element type: Symbol</p>

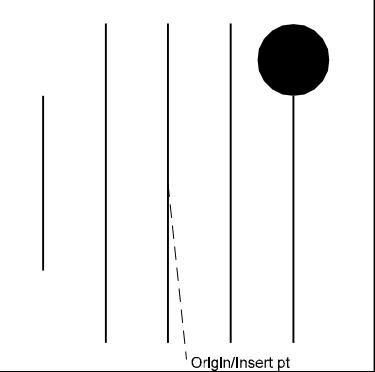
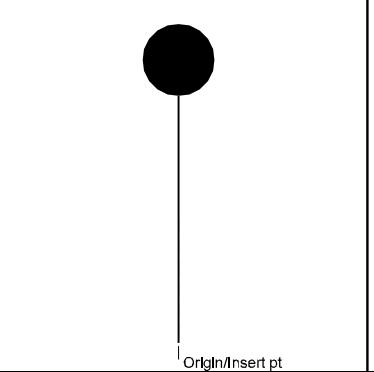
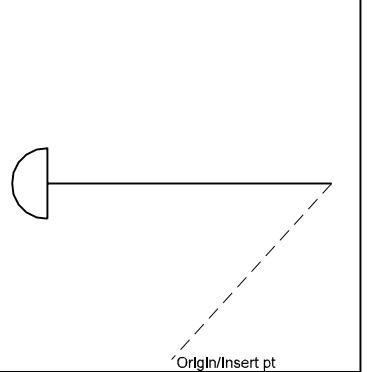
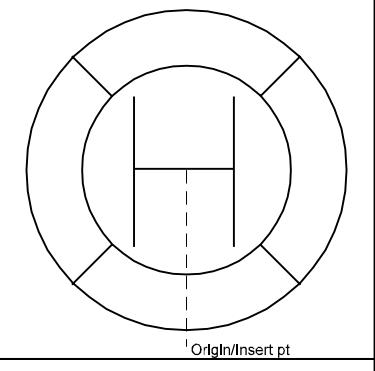
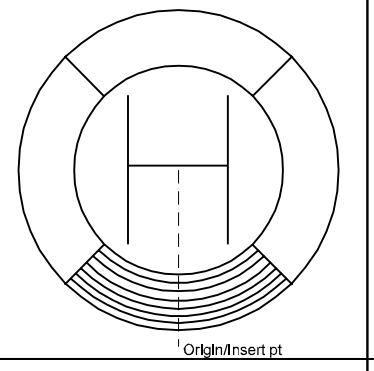
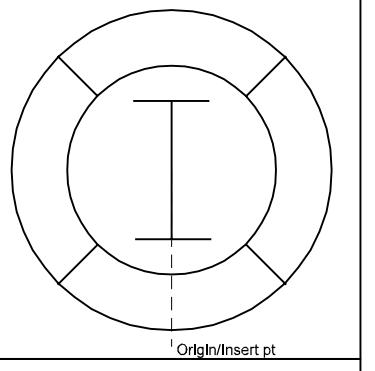
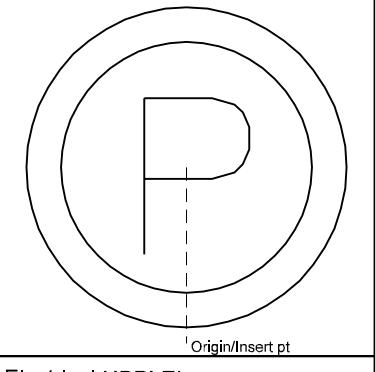
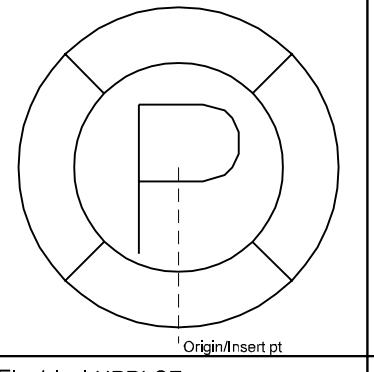
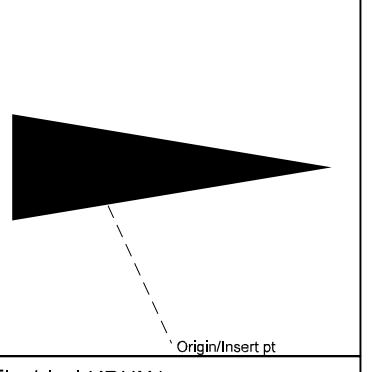
		
<p>Electrical:EHHLX ELEC HANDHOLE_EXIST Element type: Symbol</p>	<p>Electrical:ELBP1L 1LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol</p>	<p>Electrical:ELBP2L 2LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol</p>
		
<p>Electrical:ELBP3L 3LAMP EMRGNCY LGHTBTTRYPWR Element type: Symbol</p>	<p>Electrical:EMHLN ELEC MANHOLE_NEW Element type: Symbol</p>	<p>Electrical:EMHLX ELEC MANHOLE_EXIST Element type: Symbol</p>
		
<p>Electrical:EPBXN ELEC PULLBOX_NEW Element type: Symbol</p>	<p>Electrical:EPBXX ELEC PULLBOX_EXIST Element type: Symbol</p>	<p>Electrical:ERECPT EMERGENCY RECEPTACLE Element type: Symbol</p>

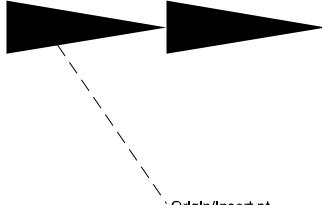
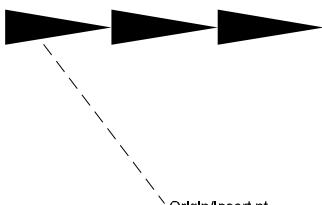
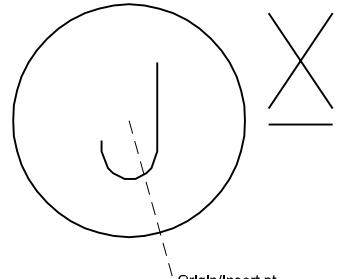
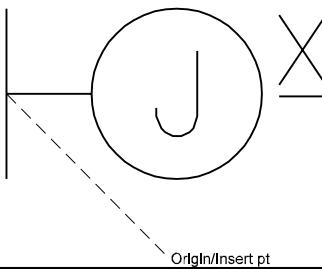
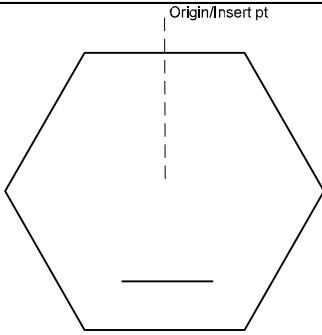
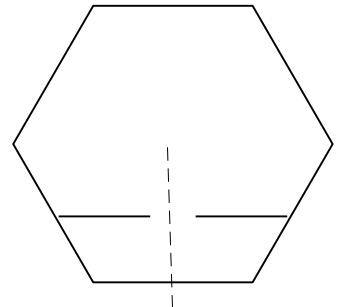
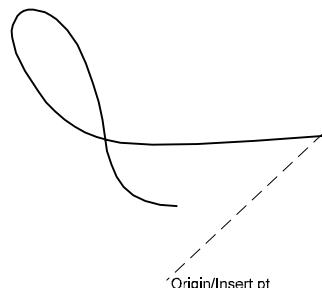
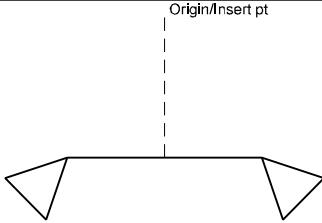
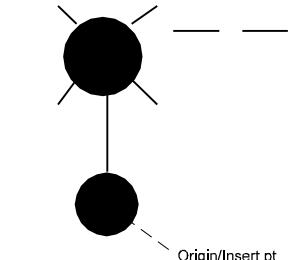
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:EXITCM CEILING MNTD EXITSIGN LIGHT Element type: Symbol	Electrical:EXITLF EXIT SIGN LIGHTED FACE Element type: Symbol	Electrical:EXITWM WALL MOUNTD EXIT SIGN LIGHT Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:FAN CEILING FAN Element type: Symbol	Electrical:FIXSPB PENDANT BATTERY FIXTURE Element type: Symbol	Electrical:FIXSPQ PENDANT QUARTZ RESTRIKE Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:FIXSPR PENDANT FIXTURE Element type: Symbol	Electrical:FIXWM WALL MOUNTED FIXTURE Element type: Symbol	Electrical:FIXWMB WALL MOUNTED BATTERY FIXTURE Element type: Symbol

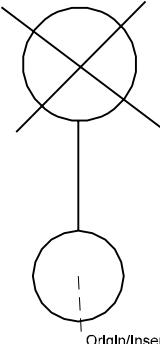
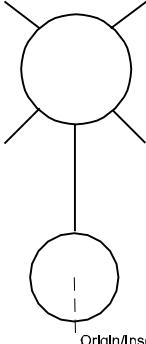
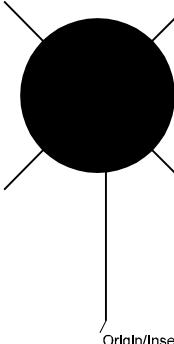
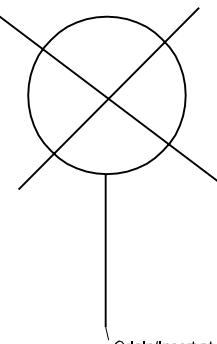
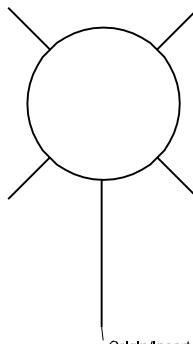
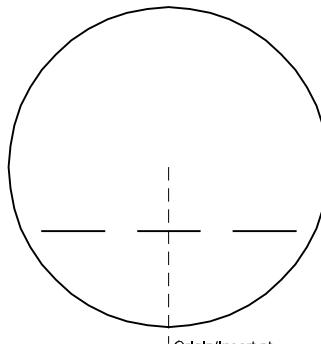
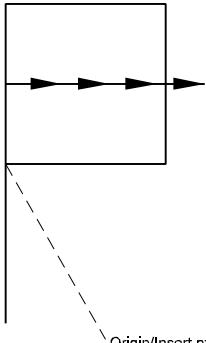
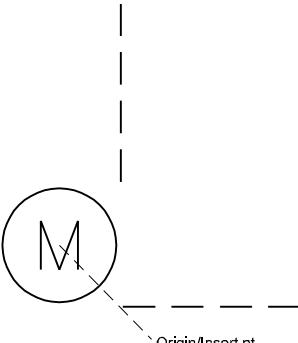
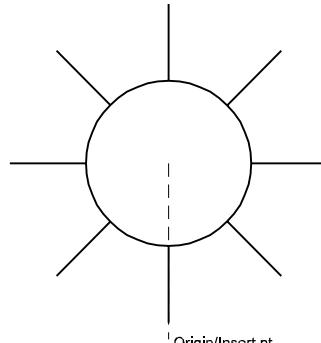
		
Electrical:FL14WB 1X4 WALL MNT FIXT W BATTERY Element type: Symbol	Electrical:FL14WM 1X4 WALL MNT FIXTURE Element type: Symbol	Electrical:FL1X4 1X4 LIGHT FIXTURE Element type: Symbol
		
Electrical:FL1X4B 1X4 LIGHT FIXTURE W BATTERY Element type: Symbol	Electrical:FL1X4C 1X4 LIGHT CONTINUOUS Element type: Symbol	Electrical:FL2X2 2X2 LIGHT FIXTURE Element type: Symbol
		
Electrical:FL2X2B 2X2 LIGHT FIXTURE W BATTERY Element type: Symbol	Electrical:FL2X2C 2X2 LIGHT CONTINUOUS Element type: Symbol	Electrical:FL2X4 2X4 LIGHT FIXTURE Element type: Symbol

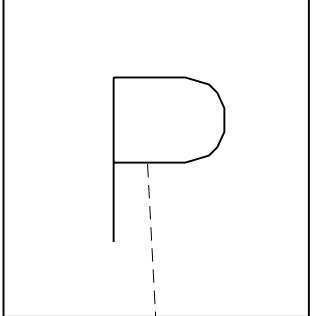
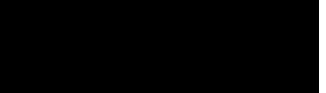
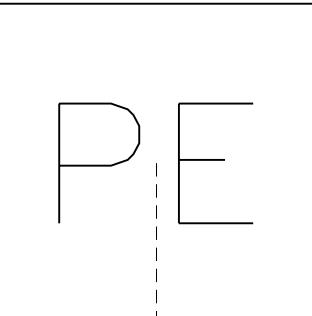
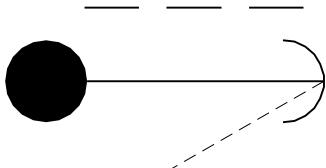
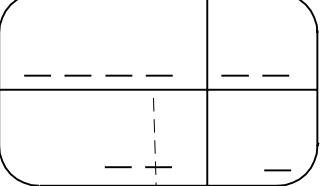
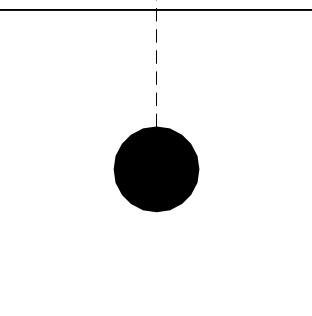
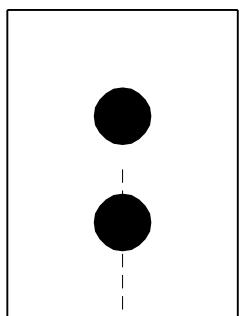
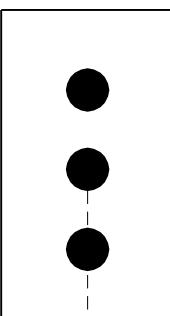
		
Electrical:FL2X4B 2X4 LIGHT FIXTURE W BATTERY Element type: Symbol	Electrical:FL2X4C 2X4 LIGHT CONTINUOUS Element type: Symbol	Electrical:FLTN FLOODLIGHT_NEW Element type: Symbol
		
Electrical:FLTR FLOODLIGHT_REMOVE Element type: Symbol	Electrical:FLTX FLOODLIGHT_EXISTING Element type: Symbol	Electrical:FUSRAT FUSE WITH RATING Element type: Symbol
		
Electrical:GENRTR GENERATOR Element type: Symbol	Electrical:GRDROD GROUNDING ROD Element type: Symbol	Electrical:GROUND EARTH GROUND Element type: Symbol

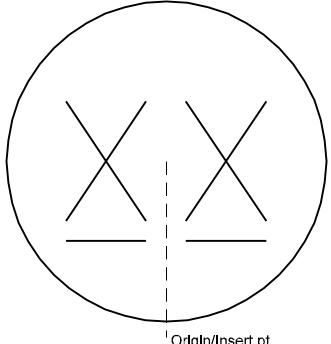
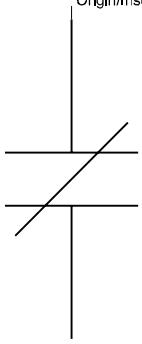
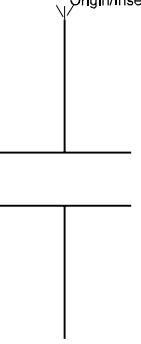
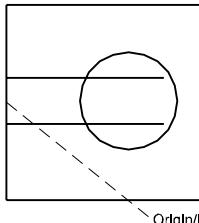
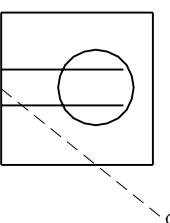
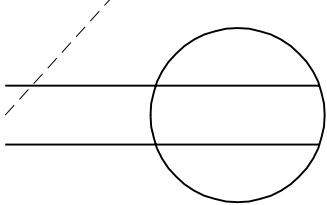
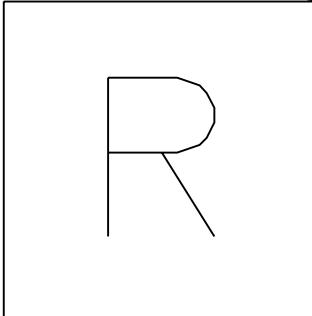
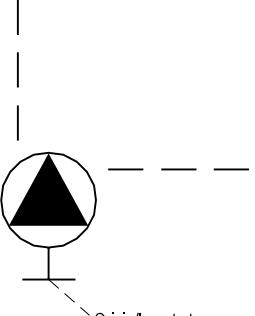
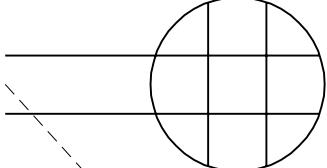
Electrical:HAS1H 1 HOT LEG Element type: Symbol	Electrical:HAS1N 1 NEUTRAL LEG Element type: Symbol	Electrical:HAS1S 1 SWITCH LEG Element type: Symbol
Electrical:HAS2H 2 HOT LEGS Element type: Symbol	Electrical:HAS2S 2 SWITCH LEGS Element type: Symbol	Electrical:HAS3HN 3 HOT 1 NEUT LEGS Element type: Symbol
Electrical:HAS3MK HOT NEUTRAL GROUND Element type: Symbol	Electrical:HAS3S 3 SWITCH LEG Element type: Symbol	Electrical:HAS4MK 2 HOT NEUTRAL GROUND Element type: Symbol

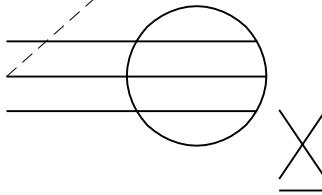
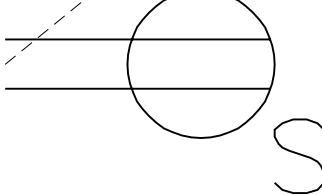
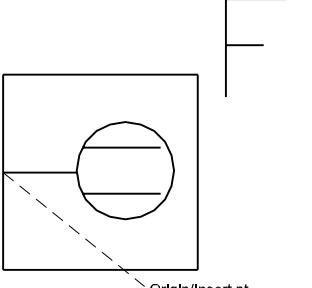
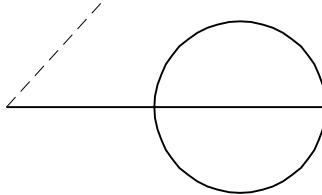
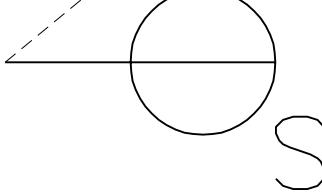
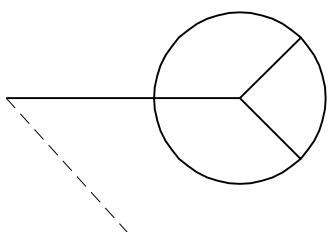
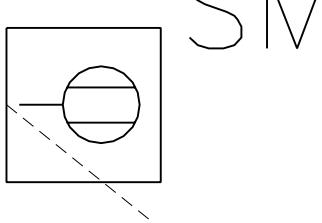
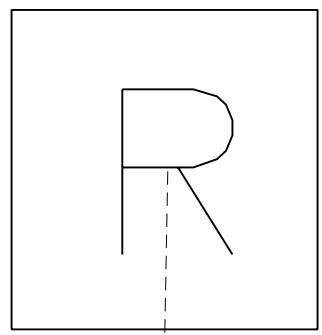
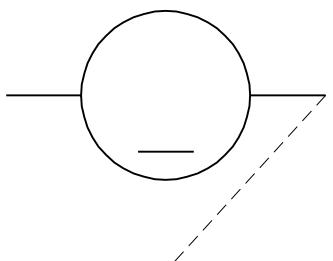
		
Electrical:HAS5MK 3 HOT NEUTRAL GROUND Element type: Symbol	Electrical:HASGND 1 GROUND LEG Element type: Symbol	Electrical:HEDASW AERIAL SERVICE WEATHER HEAD Element type: Symbol
		
Electrical:HLL HOVERLANE Element type: Symbol	Electrical:HLLL HOVERLANE LIMIT LIGHT Element type: Symbol	Electrical:HPIL HELIPAD INSET LIGHT Element type: Symbol
		
Electrical:HPPLEL HELIPAD PER LIGHT_ELEVATED Element type: Symbol	Electrical:HPPLSF HELIPAD PERLIGHT_SEMIFLUSH Element type: Symbol	Electrical:HRUN1 HOME RUN 1 Element type: Symbol

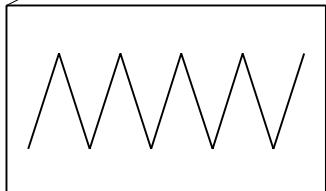
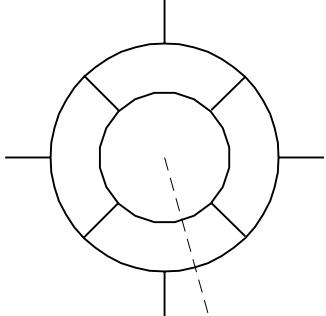
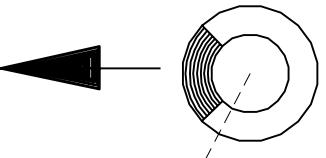
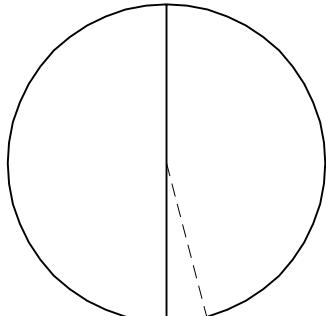
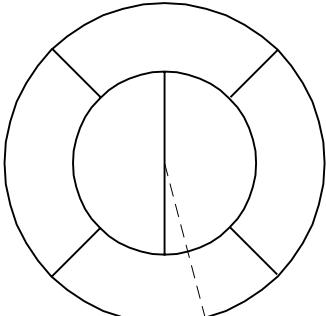
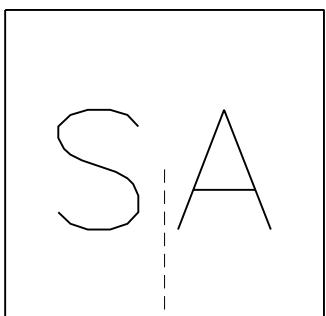
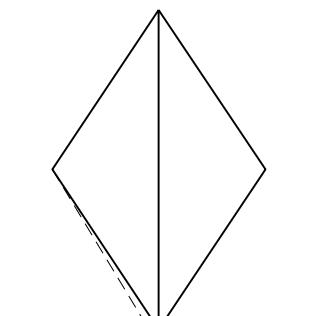
		
Electrical:HRUN2 HOME RUN 2 Element type: Symbol	Electrical:HRUN3 HOME RUN 3 Element type: Symbol	Electrical:JNBX EXTERIOR UTIL JUNCTION BOX Element type: Symbol
		
Electrical:JNBXWM JUNCTION BOX WALL MT Element type: Symbol	Electrical:KNR KEYED NOTE REFERENCE Element type: Symbol	Electrical:KNRM KEYED NOT MULTIPLE Element type: Symbol
		
Electrical:LEADER LEADER LINE Element type: Symbol	Electrical:LITEBR EMRGNCYBTTRY PWRLGHTREMOT Element type: Symbol	Electrical:LTPLN LIGHT POLE_NEW Element type: Symbol

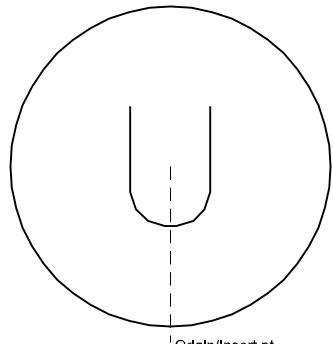
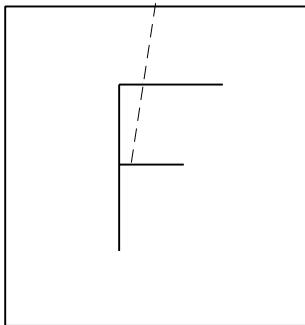
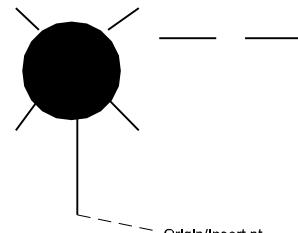
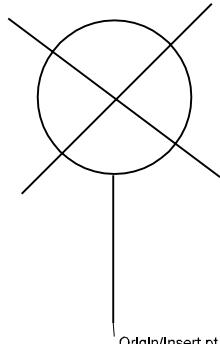
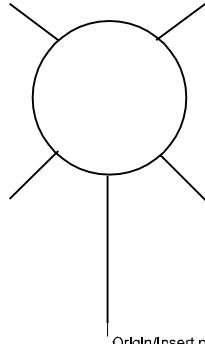
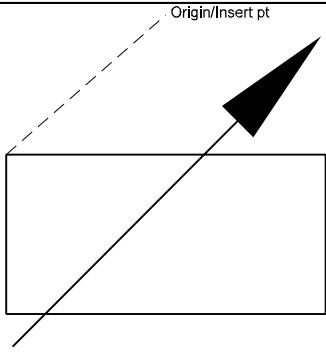
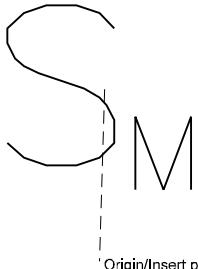
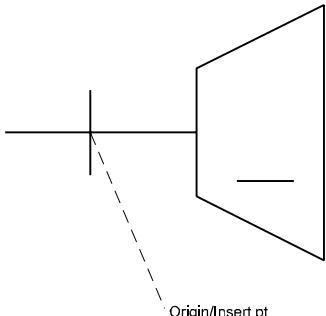
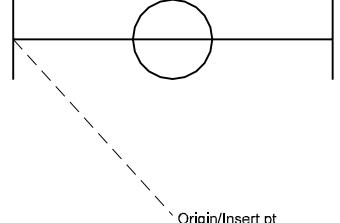
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:LTPLR LIGHT POLE_REMOVE Element type: Symbol	Electrical:LTPLX LIGHT POLE_EXISTING Element type: Symbol	Electrical:LTSTRN STREET LITE BRACKET_NEW Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:LTSTRR STREET LITE BRACKET_REMOVE Element type: Symbol	Electrical:LTSTRX STREET LITE BRACKET_EXIST Element type: Symbol	Electrical:METREL ELECTRICAL METER Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:MICROW OUTDOOR MICROWAVE XMIT UNT Element type: Symbol	Electrical:MOTRHP MOTOR HP Element type: Symbol	Electrical:OBSTRL OBSTRUCTION LIGHT Element type: Symbol

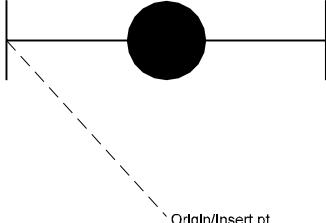
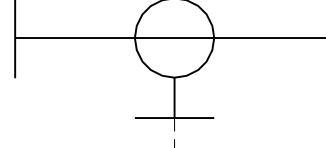
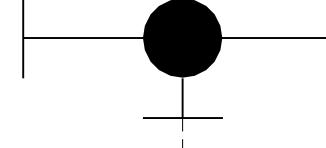
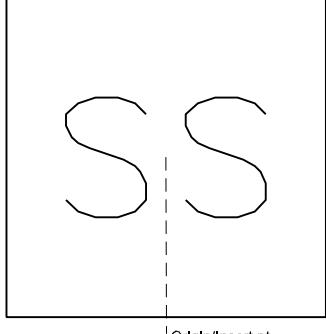
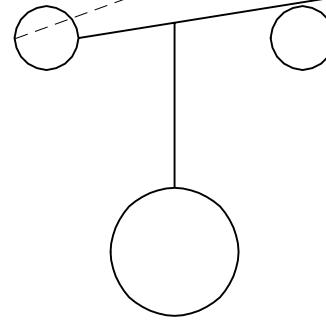
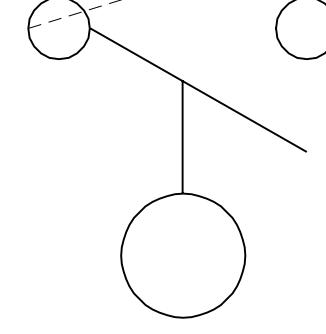
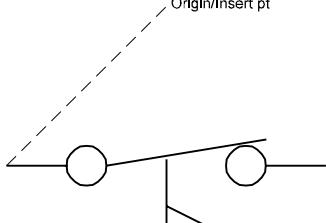
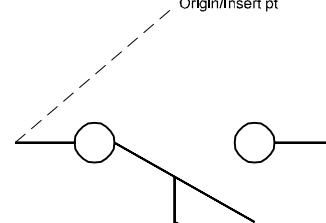
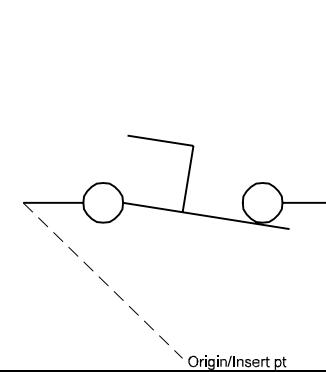
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:PAPI PAPI LIGHT UNIT Element type: Symbol	Electrical:PBFMC FLUSH MNTD PANELBRD CABINET Element type: Symbol	Electrical:PBSMC SURFACE MNTD PANELBRD CAB Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:PHOTO PHOTOELECTRIC RELAY Element type: Symbol	Electrical:POLEAR AERIAL POLE W GUYING Element type: Symbol	Electrical:POLEID POLE IDENT. SYMBOL Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:PSHST1 ONE PUSHBUTTON STATION Element type: Symbol	Electrical:PSHST2 TWO PUSHBUTTON STATION Element type: Symbol	Electrical:PSHST3 THREE PUSHBUTTON STATION Element type: Symbol

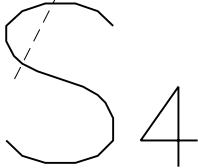
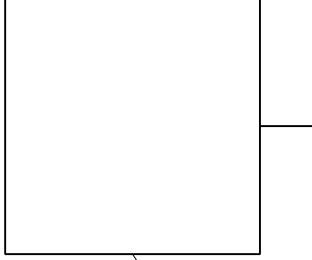
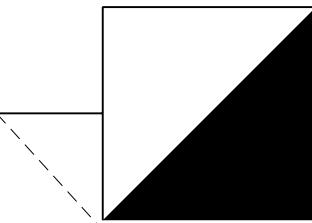
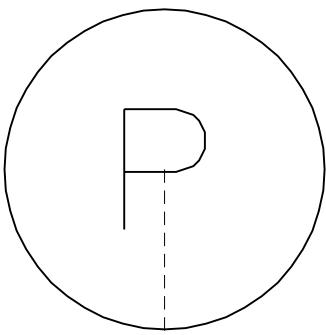
		
<p>Electrical:PWRDVC POWER SYSTEM DEVICE ANSI Element type: Symbol</p>	<p>Electrical:RCNC NORMALLY CLSD RELAY CONTACT Element type: Symbol</p>	<p>Electrical:RCNO NORMALLY OPEN RELAY CONTACT Element type: Symbol</p>
		
<p>Electrical:RECDFM DOUBLEFLUSHMOUNTFLOOROUTLET Element type: Symbol</p>	<p>Electrical:RECDSM DOUBLESURFMOUNTFLOOROUTLET Element type: Symbol</p>	<p>Electrical:RECDUP DUPLEX RECEPTACLE Element type: Symbol</p>
		
<p>Electrical:RECLOS RECLOSER AERIAL AUTOMATIC Element type: Symbol</p>	<p>Electrical:RECPT2 SPECIAL RECEPTACLE Element type: Symbol</p>	<p>Electrical:RECQUA QUADRUPLEX RECEPTACLE Element type: Symbol</p>

		
Electrical:RECRAN RECEPTACLE RANGE Element type: Symbol	Electrical:RECSDP SWITCHED DUPLEX RECEPTACLE Element type: Symbol	Electrical:RECSFM SINGLE FLUSH MOUNT FLR OUTL Element type: Symbol
		
Electrical:RECSIN SINGLE RECEPTACLE Element type: Symbol	Electrical:RECSNS SNGL RECEPTACLE WITH SWITCH Element type: Symbol	Electrical:RECSPR SPECIAL PURPOSE RECEPTACLE Element type: Symbol
		
Electrical:RECSSM SINGLESURFMOUNTFLOOROUTLET Element type: Symbol	Electrical:REIL REIL LIGHT UNIT Element type: Symbol	Electrical:RELYOP RELAY OP COIL Element type: Symbol

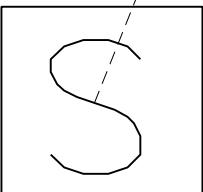
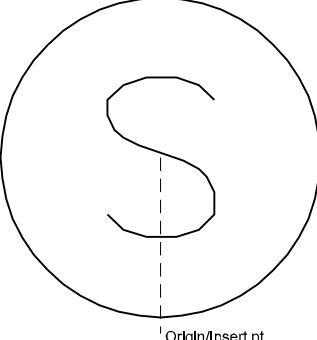
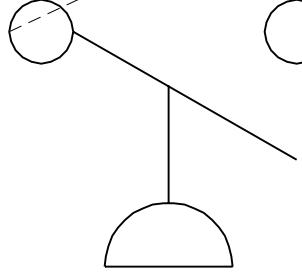
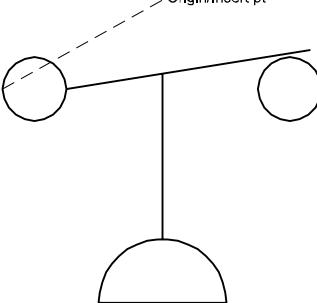
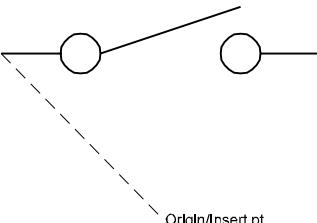
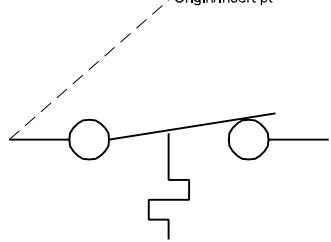
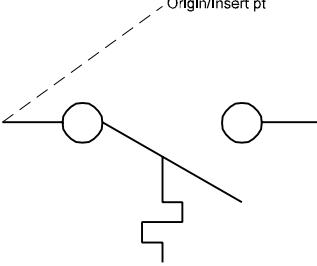
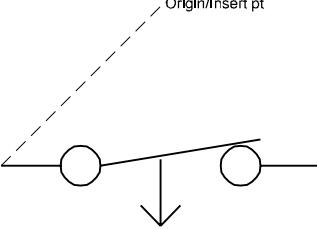
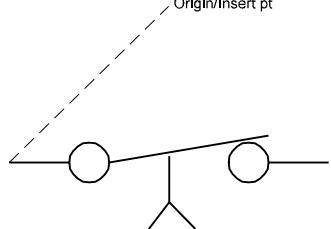
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Electrical:RESHTR ELECTRIC RESISTANCE HEATER Element type: Symbol</p>	<p>Electrical:RWCLL RW CENTERLINE LIGHT Element type: Symbol</p>	<p>Electrical:RWEL RW END LIGHT Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>, Origin/Insert pt</p>
<p>Electrical:RWLEL RW EDGE LIGHT_ELEVATED Element type: Symbol</p>	<p>Electrical:RWLSF RW EDGE LIGHT_SEMIFLUSH Element type: Symbol</p>	<p>Electrical:S3ABC 3 THREE WAY SWITCHES Element type: Symbol</p>
 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>	 <p>Origin/Insert pt</p>
<p>Electrical:SABC THREE SINGLE SWITCHES Element type: Symbol</p>	<p>Electrical:SECTAA SECTIONALIZER AERIAL AUTO Element type: Symbol</p>	<p>Electrical:SENGV GENERIC VOLUMETRIC SENSOR Element type: Symbol</p>

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:SENULS ULTRASONIC SENSOR Element type: Symbol	Electrical:SFL SEQUENCED FLASHER LIGHT Element type: Symbol	Electrical:SLLN STLT LUMINAIRE_NEW Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:SLLR STLT LUMINAIRE_REMOVE Element type: Symbol	Electrical:SLLEX STLT LUMINAIRE_EXISTING Element type: Symbol	Electrical:SLREG CONSTNT CURRENT TRANSFORMER Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:SM MOTOR SWITCH Element type: Symbol	Electrical:SOUNDS SOUND SYSTEM INDICATE USE Element type: Symbol	Electrical:STP14 SURF PEND REC 1X4 STRP Element type: Symbol

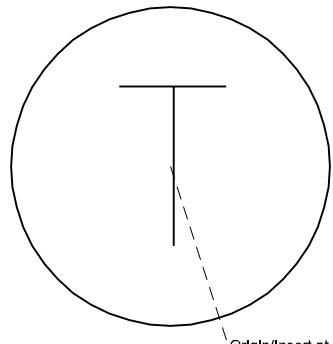
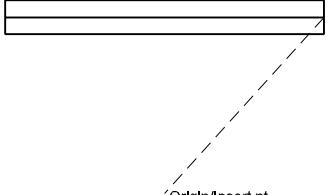
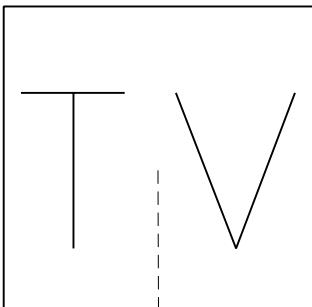
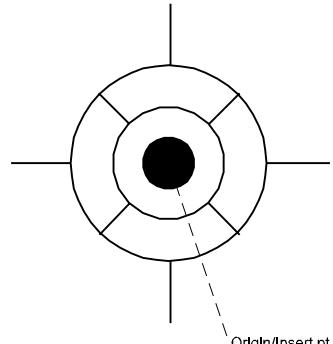
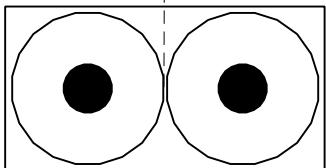
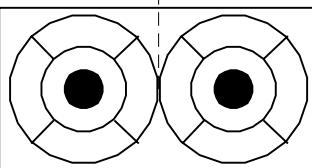
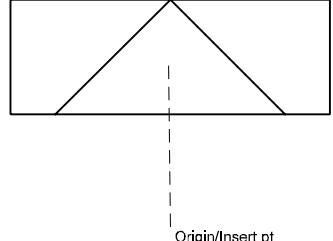
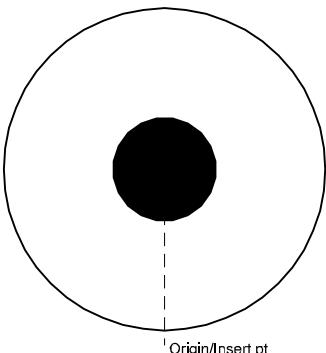
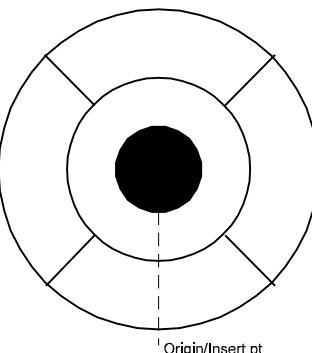
		
Electrical:STP14B SURFACE 1X4 STRIP BATTERY Element type: Symbol	Electrical:STP18 SURF PEND REC 1X8 STRP Element type: Symbol	Electrical:STP18B SURFACE 1X8 STRIP BATTERY Element type: Symbol
		
Electrical:SUBSTA SUBSTATION Element type: Symbol	Electrical:SWFLNC NORMALLY CLOSED FLOAT SWTCH Element type: Symbol	Electrical:SWFLNO NORMALLY OPEN FLOAT SWITCH Element type: Symbol
		
Electrical:SWFNC NORMALLY CLOSED FLOW SWITCH Element type: Symbol	Electrical:SWFNO NORMALLY OPEN FLOW SWITCH Element type: Symbol	Electrical:SWFONC NORM CLSD FOOT OPRTD SWTCH Element type: Symbol

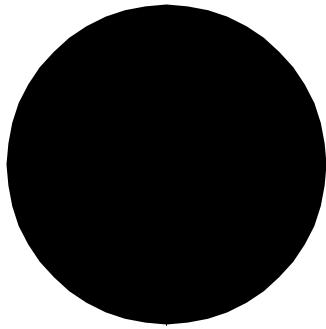
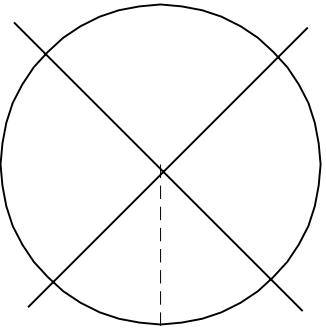
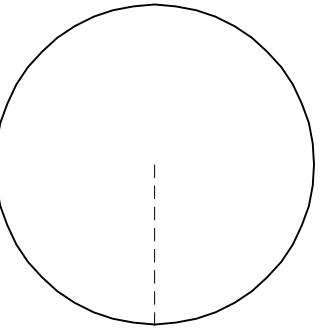
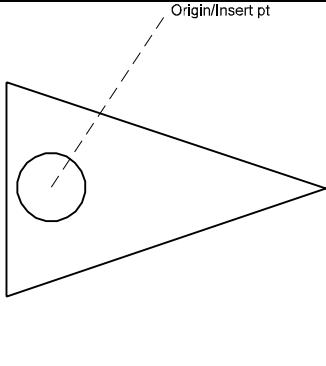
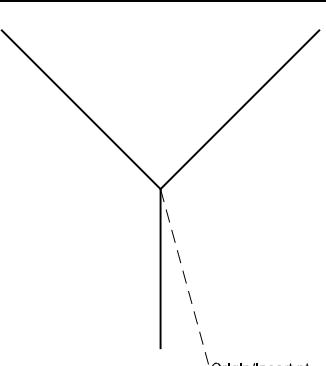
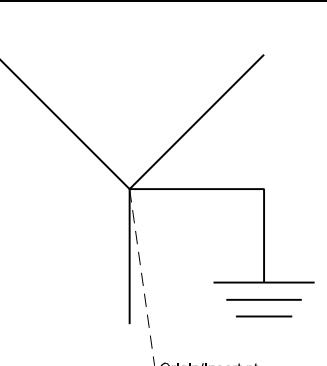
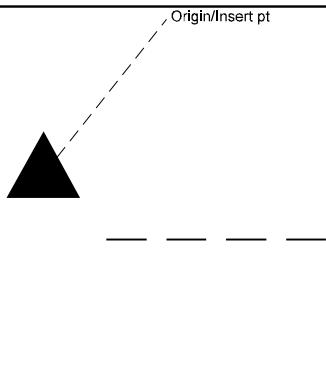
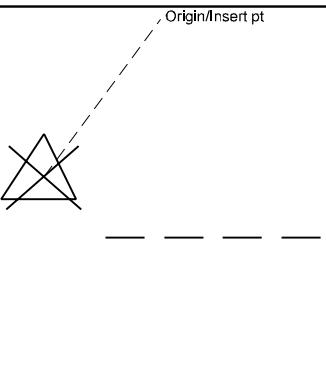
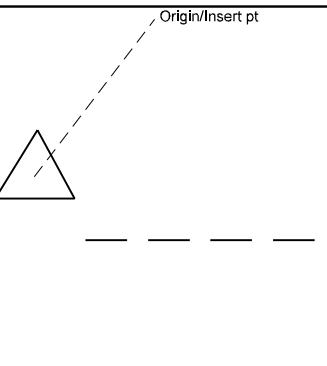
		
Electrical: SWI2WY DOUBLE POLE SWITCH Element type: Symbol	Electrical: SWI3WY THREE WAY SWITCH Element type: Symbol	Electrical: SWI4WY FOUR WAY SWITCH Element type: Symbol
		
Electrical: SWICB CIRCUIT BREAKER Element type: Symbol	Electrical: SWIDIS DISCONNECT SWITCH Element type: Symbol	Electrical: SWIDM1 DIMMER Element type: Symbol
		
Electrical: SWIDM2 DIMMER SWITCH Element type: Symbol	Electrical: SWIDUR DURESS SWITCH Element type: Symbol	Electrical: SWIFUS FUSED SWITCH Element type: Symbol

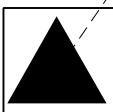
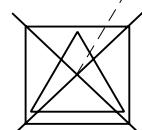
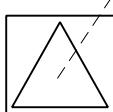
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
<p>Electrical:SWIKEY KEY OPERATED SWITCH Element type: Symbol</p>	<p>Electrical:SWILVM LOW VOLTAGE MASTER SWITCH Element type: Symbol</p>	<p>Electrical:SWITCH SINGLE POLE SWITCH Element type: Symbol</p>
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
<p>Electrical:SWITIM TIMER OPERATED SWITCH Element type: Symbol</p>	<p>Electrical:SWLAMP LAMP HOLDER POLE SWITCH Element type: Symbol</p>	<p>Electrical:SWLNC NORMALLY CLOSED LIMIT SWTCH Element type: Symbol</p>
Origin/Insert pt	Origin/Insert pt	Origin/Insert pt
<p>Electrical:SWLNO NORMALLY OPEN LIMIT SWITCH Element type: Symbol</p>	<p>Electrical:SWMULT MULTIPOSITION SWITCH Element type: Symbol</p>	<p>Electrical:SWPADN SWITCH_PAD_NEW Element type: Symbol</p>

 X		
Electrical:SWPADX SWITCH_PAD_EXIST Element type: Symbol	Electrical:SWPCM CEILING MOUNTED PULL SWITCH Element type: Symbol	Electrical:SWPCOI PRES SWITCH CLSE ON INCREASE Element type: Symbol
		
Electrical:SWPOOI PRESS SWTCH OPN ON INCREASE Element type: Symbol	Electrical:SWSBRK SINGLE BREAK SWITCH Element type: Symbol	Electrical:SWTANC NORMCLS TEMP ACTIVATED SWTCH Element type: Symbol
		
Electrical:SWTANO NORMOPEN TEMP ACTIVATED SWTCH Element type: Symbol	Electrical:SWTDNC NORM CLSD TIME DELAY SWITCH Element type: Symbol	Electrical:SWTDNO NORM OPEN TIME DELAY SWITCH Element type: Symbol

Electrical:TDZL TOUCHDOWN ZONE LIGHT Element type: Symbol	Electrical:THL THRESHOLD LIGHT Element type: Symbol	Electrical:TOWER TRANSMISSION TOWER Element type: Symbol
Electrical:TRFSIG TRAFFIC SIGNAL MAST ARM Element type: Symbol	Electrical:TSCTRL TR SIGNAL CONTROLLER Element type: Symbol	Electrical:TSHEAD TRAFFIC SIGNAL HEAD Element type: Symbol
Electrical:TSPBX TR SIGNAL PULLBOX Element type: Symbol	Electrical:TSPHS TR SIGNAL PH NO_THRU Element type: Symbol	Electrical:TSPHT TR SIGNAL PH NO_TURN Element type: Symbol

 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:TSTAT THERMOSTAT Element type: Symbol	Electrical:TSVLDT IR SIGNAL VEH LOOP DETECTOR Element type: Symbol	Electrical:TVOUT TELEVISION OUTLET Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:TWCLL TW CENTERLINE LIGHT Element type: Symbol	Electrical:TWEEL TW END LIGHT_ELEVATED Element type: Symbol	Electrical:TWELSF TW END LIGHT_SEMIFLUSH Element type: Symbol
 Origin/Insert pt	 Origin/Insert pt	 Origin/Insert pt
Electrical:WGSGN TW GUIDANCE SIGN Element type: Symbol	Electrical:TWEL TW EDGE LIGHT_ELEVATED Element type: Symbol	Electrical:WLSF TW EDGE LIGHT_SEMIFLUSH Element type: Symbol

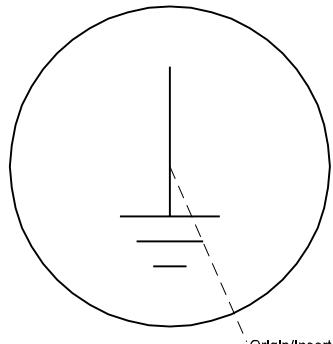
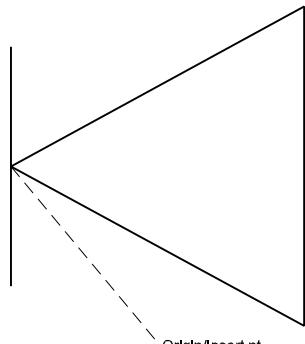
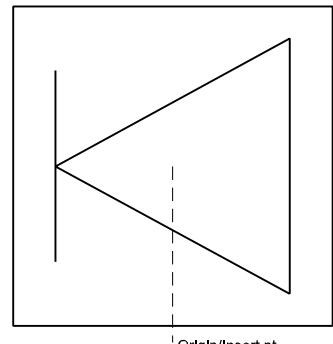
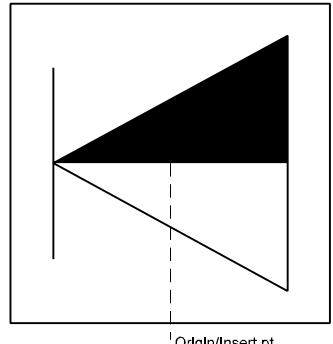
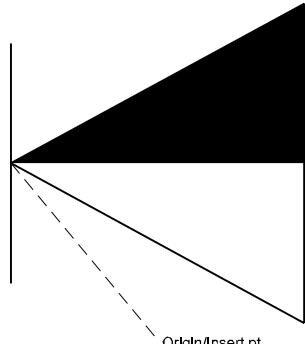
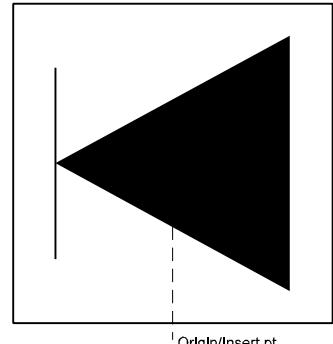
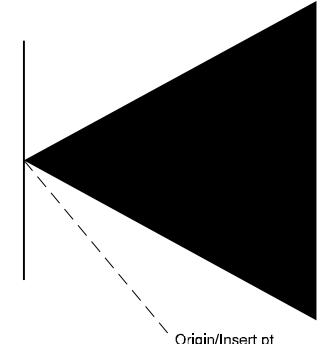
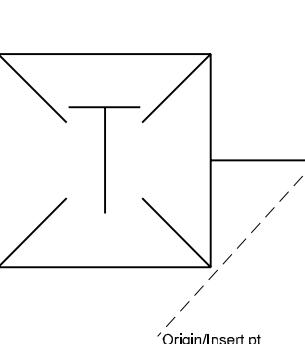
		
<p>Electrical:UTPLN POLE_NEW Element type: Symbol</p>	<p>Electrical:UTPLR POLE_REMOVE Element type: Symbol</p>	<p>Electrical:UTPLX POLE_EXISTING Element type: Symbol</p>
		
<p>Electrical:WINDCN WINDCONE Element type: Symbol</p>	<p>Electrical:WYECON XFMR WYE CONNECTION Element type: Symbol</p>	<p>Electrical:WYEXGC XFMR GROUNDED CONNECTION Element type: Symbol</p>
		
<p>Electrical:XFRPLN XFMR_POLE_NEW Element type: Symbol</p>	<p>Electrical:XFRPLR XFMR_POLE_REMOVE Element type: Symbol</p>	<p>Electrical:XFRPLX XFMR_POLE_EXIST Element type: Symbol</p>

		
Electrical:XF RPMN XFMR_PAD_NEW Element type: Symbol	Electrical:XF RPMR XFMR_PAD_REMOVE Element type: Symbol	Electrical:XF RPMX XFMR_PAD_EXIST Element type: Symbol

14 Telecommunications Lines Library

	<p>— F O —</p> <p>W W W W</p>
Telecommunications: FIBOPT FIBER OPTICS LINE Element type: Line	Telecommunications: WIREWAY WIREWAY Element type: Line

14 Telecommunications Symbols Library

		
Telecommunications: GRDROD GROUNDRING ROD Element type: Symbol	Telecommunications: RECDC DATACOMM WALL RECEPTACLE Element type: Symbol	Telecommunications: RECDCF DATACOMM FLOOR RECEPTACLE Element type: Symbol
		
Telecommunications: RECTDF TELEPHONE DATA FLOOR RECPTL Element type: Symbol	Telecommunications: RECDW TELEPHONE DATA WALL RECPTL Element type: Symbol	Telecommunications: RECTEF TELEPHONE FLOOR RECEPTACLE Element type: Symbol
		
Telecommunications: RECTEL TELEPHONE WALL RECEPTACLE Element type: Symbol	Telecommunications: TBOOTH TELEPHONE BOOTH Element type: Symbol	

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE (DD-MM-YYYY) September 2001			2. REPORT TYPE Final report		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE A/E/C CADD Standard, Release 2.0; Appendix D					5a. CONTRACT NUMBER	
					5b. GRANT NUMBER	
					5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) The CADD/GIS Technology Center					5d. PROJECT NUMBER	
					5e. TASK NUMBER	
					5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199					8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/ITL TR-01-6	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)					10. SPONSOR/MONITOR'S ACRONYM(S)	
					11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.						
13. SUPPLEMENTARY NOTES The main text and Appendices A, B, and C are bound in a separate volume.						
14. ABSTRACT The “A/E/C CADD Standard Manual” has been developed by the CADD/GIS Technology Center (CGTC) to reduce redundant CADD standardization efforts within the Army, Navy, and Air Force. The manual is part of an initiative to consolidate existing CADD drafting standards and to develop data standards that address the entire life-cycle of facilities within the Department of Defense Tri-Service.						
The CADD drafting standards addressed in the “A/E/C CADD Standard Manual” include presentation graphics, level/layer assignments, metric/English scales, electronic file naming, and standard symbology. As the manual evolves, it will also include nongraphic database standards that address issues such as cost engineering and specification generation. The CGTC’s primary goal is to develop a CADD standard that is generic enough to operate under various CADD software packages (such as Intergraph’s MicroStation and Autodesk’s AutoCAD) and incorporate existing industry standards when possible.						
15. SUBJECT TERMS A/E/C CADD		CADD standards Drafting standards				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			284	

